



THE BIG QUESTION

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or Mercedes?



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WHERE'S YOUR HEAD AT?

If Charles Leclerc's sheer bravura calls to mind the legendary Gilles Villeneuve, a more troubling comparison looms: the absence of a world title to add to Ferrari's trophy cabinet. But while team and car have well-publicised shortcomings, Charles might just – whisper it – be unwittingly part of the problem.



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COVER STORY
WHAT NEXT FOR LECLERC?

THE LONG INTERVIEW

THIS IS JAMES VOWLES

Moving from long-time strategy director at Mercedes – a role that latterly included overseeing adjacent racing activities such as Formula E and the young driver programme as well as calling pitstops – to become team principal at Williams was judged by many in the Formula 1 commentator to be a bit of a leap. But not to the self-proclaimed 'highly competitive' man who made it.



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THE LONG INTERVIEW
WITH JAMES VOWLES

ALEXANDER THE GREAT

From hanging on to an F1 seat by his proverbial fingertips, Alex Albon has established himself as a star in the making. So now, like the team itself, life isn't just a case of surviving from race to race – Williams is a team being rebuilt around him as the driver to lead it to future glories.




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ALBON'S STAR IS SHINING AGAIN

THE GOOD, THE BAD AND THE UGLY

Over 800 world championship races and 114 victories, the team which started life as Williams Grand Prix Engineering has notched up nine constructors' championships. It's a story of some incredible cars – and a few which fell short of greatness.



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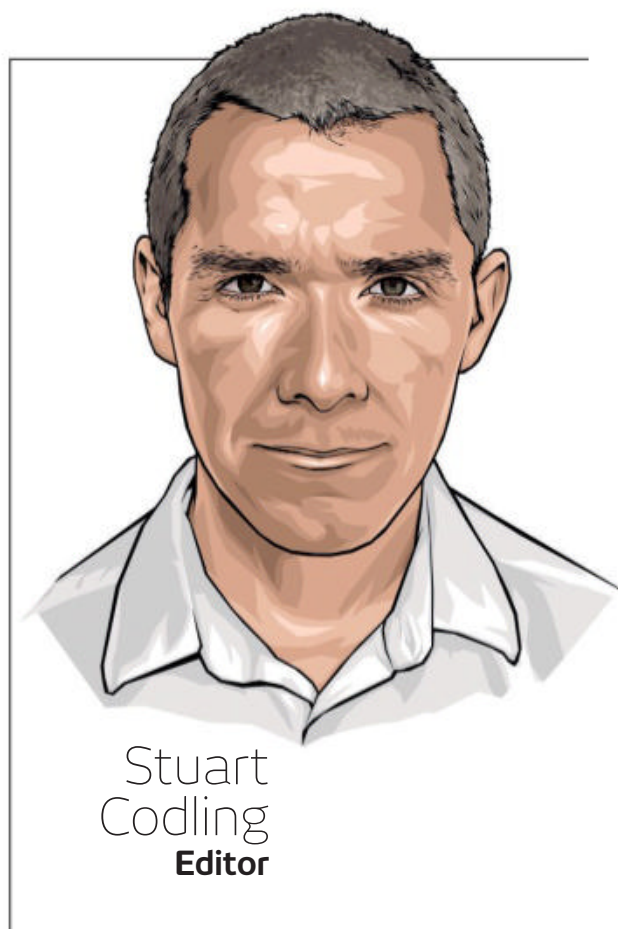
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The stakes are high for the six engine manufacturers who have committed for 2026 onwards



A Ferrari favourite is frustrated, again...

All other factors being equal, the best driver in the best car will usually win in Formula 1. We should therefore view periods of domination as an inevitability rather than weeping, wailing and lamenting as if they were plagues visited upon us unexpectedly.

That being said, Max Verstappen's current run of success is so unopposed that even he is struggling to get excited about each victory. The radio traffic on the slow-down laps is so humdrum – Max sounds like a stage magician who has just produced his 11,000th rabbit out of a hat and is struggling to remark upon it.

This state of affairs is partly the fault of the (lack of) opposition, hence our focus on Charles Leclerc this month. Given equal machinery, he's quick enough to take it to Max. The trouble is, Ferrari is once again mired in technical inertia and operational dysfunction. Amid signs of fractures in the relationship between the team and its star, this month Alex Kalinauckas analyses the prospects of Charles moving elsewhere... should any such vacancies be in the offing. And, perhaps most tantalisingly, we ask if the comparisons Ferrari and the tifosi like to draw between Leclerc and the late Gilles Villeneuve run deeper than their shared speed and exuberance.

Villeneuve was beloved by Ferrari but there were doubts over whether he could tame his wildness sufficiently to mount a championship challenge. The other element of this equation was whether

Ferrari could get its act together. Gilles came close to leaving for McLaren and it's believed that at the time of his death he was exploring his options for 1983 and beyond.

On the subject of venerable teams hoping for an escape from the doldrums, this month Williams marks its 800th grand prix in Hungary, a milestone it had hoped to observe on home turf at Silverstone but was denied by the fickle Emilia-Romagna weather. Cynical readers might point out it had not long ago made a hoo-ha about reaching 750, and wonder what arbitrary figure might generate the next celebration. Well, given the ever-expanding calendar, 800 has indeed followed relatively swiftly in the wake of 750, but much has changed at 'Team Willy' in the interim.

Previous team principal Jost Capito tried and failed to elevate Williams from the back of the grid. It's a sign of owner Dorilton Capital's ambition that it hired Mercedes leader-in-waiting James Vowles and signed off on his long-term vision of a return to greatness. We've spoken to both him and lead driver Alex Albon this month, as well as looking at some of the team's technical hits (and misses) from the past 800 GPs. Even the failures tell a compelling story...

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Contributors



ALEX KALINAUCKAS

Alex address the tricky question of Charles Leclerc's future and what his options could be if he decides to leave Ferrari (p30)



OLEG KARPOV

Oleg sat down with Alex Albon to find out why Williams are on the up and what it's like having a team built around him for a change (p62)



JAKE BOXALL-LEGGE

Autosport's F1 writer has deciphered what's different on Mercedes' B-spec W14 and whether the changes have worked (p42)



MAURICE HAMILTON

With Williams reaching the 800 GP mark this year, Maurice has taken a look at some of the team's best, worst and just plain ugly cars (p66)

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Riding the oranje boom

One of the bonuses of the Red Bull Ring's compact layout is that you can shift vantage points and get to another part of the circuit pretty quickly. Max's home fans are keen travellers around European races so I was expecting some hysteria if, or rather when, he won.

Having captured a shot on the cool-down lap of Max big in the frame, waving to the flags, I ran to another spot to get him going past the 'Oranje Army'. Technically it wasn't difficult to shoot but the devil was in the correct framing and focal length. In future years images like this will look pretty cool, much as we look at old shots of Michael Schumacher in his pomp now.



Photographer
Andy Hone

Where Spielberg, Austria
When 4,29pm, Sunday
2 July 2023

Details Canon EOS-1DX MkIII
500mm lens, 1/2000th @ F4









You can spray that again, Lando

For all that the podium ceremony is orchestrated so that nothing can go wrong (even the sparkling wine bottles are partially uncorked to avoid scenes of drivers being unable to pop them open), the unexpected can and does happen.

Lando Norris had a brilliant race and he knew it. So did Lewis Hamilton and you can see the warmth here. It was a proper battle between them after the restart. After this shot, Lewis gave him a congratulatory slap on the shoulder. Before it there was an amusing scene when Lando did his 'bottle slam' and caused Max's trophy to fall off the podium – fortunately not the RAC's golden one!



Photographer
Jake Grant

Where Silverstone, UK
When 4.38pm, Sunday
9 July 2023

Details Canon EOS-1DX MkII
600mm lens, 1/1600th @ F4

The art of parting company

Although you build up a collection of images from a race weekend during practice and qualifying, you always have to be on the alert to capture shots which tell the story of what's going on. Even when you're out on the circuit it's worth keeping an eye on the big TVs in case there's an incident.

I was working in the pitlane on race day in Montréal. George Russell was the first to hit a wall – at the Turn 8/9 chicane – on lap 12 and took the nose off his Mercedes as well as cracking a wheel rim. I saw it on TV and positioned myself to get him coming into the pits. The zoom lens gave me added flexibility and, as a bonus, his tyre popped off as he arrived at the box.



Photographer
Mark Sutton

Where Montréal, Canada

When 2:18pm, Sunday
18 June 2023

Details Nikon D6
180-400mm lens, 1/1000th @ F13





Just saying it could make it happen

It's a classic Silverstone image that puts you in mind of the video to Kate Bush's hit *Cloudbusting* – an accumulation of cumulus, if you like. You can get all four seasons in one day here, even in summer, thanks to the circuit's location on a windy plateau (that's the reason they built an airfield here originally).

Friday at the British Grand Prix had the best forecast and was indeed bright and sunny, but even the fairweather cumulus clouds can look threatening when they gather in this density. I took advantage of the brightness of the sky to play with the exposure a bit, darkening off the clouds and circuit to make for an atmospheric image.



Photographer
Simon Galloway

Where Silverstone, UK

When 4:46pm, Friday
7 July 2023

Details Nikon Z9
24-70mm lens, 1/160th @ F13





That's no leap of faith...

Another occasion where being in the right place at the right time delivered the goods. It was a frustrating Friday in Montréal after a number of delays: FP1 had barely started when Pierre Gasly's Alpine broke, followed by the circuit's CCTV system. Very sensibly the FIA cancelled all track activity until race control could have eyes on everything.

FP2 was extended to 90 minutes but half an hour in there was another red flag as Nico Hülkenberg's Haas broke down. I heard the engine let go as he accelerated onto the main straight. Then it was just a case of waiting for him to do the 'ERS jump', a precautionary measure in case the car is 'live'.



Photographer
Mark Sutton

Where Montréal, Canada

When 4:58pm, Friday
16 June 2023

Details Nikon D6
180-400mm lens, 1/640th @ F16





WHY RED BULL IS FIGHTING 2026 ENGINE RULES

01 While there hasn't been much of a sporting battle for either of Formula 1's major titles this season, a fierce confrontation is brewing on its political stage – and the 2026 regulations are the chosen battleground.

The frontmen are familiar faces. Christian Horner and Toto Wolff have never needed much prompting to initiate a verbal altercation but, in this case, there is a tangible cause: nothing less than the fear that a new generation of F1 cars will become “technical Frankensteins”. Such was the definition used by the Red Bull Racing boss (erroneously – as enshrined in *The Economist* style guide, “Frankenstein was not the monster, but its creator”) to describe the challenge facing engine manufacturers and teams as they prepare for the 2026 rule change.

Red Bull's recently incorporated powertrains division says it has identified a problem in its simulations which

IF HORNER'S GOAL IS TO GET THE REGULATIONS CHANGED, IT'S GOING TO BE EXTREMELY DIFFICULT TO ACHIEVE

could lead to unwanted anomalies – including drivers having to downshift on straights. The reason for this is claimed to be the chosen ratio of combustion engine and electric power output, which will be divided equally in the new generation

of powertrains. This 50:50 split, Horner warns, could result in batteries running out of power on tracks with particularly long straights, such as Baku, Montréal and Monza. In addition, the need to reduce drag is likely to be satisfied through the introduction of moveable aerodynamic elements – which, owing to a reduced slipstream effect, could have a negative impact on the number of overtakes and thus the racing spectacle.

“Where we need to pay urgent attention before it's too late is to look at the ratio between combustion power and electrical power,” Horner said. “[We need] to ensure that we're not creating a technical Frankenstein, which will require the chassis to compensate to such a degree with moveable aero and reduce the drag to such a level that the racing will be affected – and that there will be no tow effect and no DRS because effectively you're running



The Red Bull RB19 (above) is a thing of beauty and in Verstappen's hands is running away with the world championship. But the Dutchman has echoed his team's concerns about the 2026 engine rules and the look of the cars

like that at all points in time.

“Plus, with the characteristics of these engines, [to ensure] that the combustion engine just doesn't become a generator to recharge a battery. F1 needs to be wheel-to-wheel racing. We can't afford to lose that challenge and have drivers downshifting on the straights to regenerate batteries.”

His fears are echoed by Max Verstappen.

“To me, it looks pretty terrible,” said Max, who has already tested a prototype 2026 car-and-engine package on the simulator. “If you go flat out on the straight at Monza, and I don't know what it is, like four or five hundred [metres] before the end of the straight, you have to downshift flat out because that's faster. I think that's not the way forward.”

Horner believes F1 could hedge its bets by tweaking the plans slightly, through a simple ten or even five per cent shift between combustion and electric power in favour of



Red Bull thinks that in 2026, on long straights at tracks such as Baku (above), cars could run out of battery power



Horner, with 2026 engine partner Ford's CEO Jim Farley (top), and Wolff (above) are at opposite ends of the argument over the new rules

combustion. But while his concerns are understood to be shared by some other teams, publicly he has not been actively supported by any of his colleagues. The role of main opponent was taken, as usual, by Wolff. The Mercedes boss argued that Horner's attempt to initiate a discussion was almost certainly driven by his own concerns about Red Bull Powertrains' ability to produce a competitive power unit.

"I think what frightens him more maybe is that his engine programme is not coming along, and then maybe he wants to kill it [the rules] that way," Wolff asserted. "You always have to question what's the real motivation to say something like that."

Such an accusation could well be justified, given that the 2026 engine project is in fact the first Red Bull Powertrains has ever worked on. And some concerns had been raised in the past about the ability of Red Bull's new company to develop the hybrid component of the power unit – especially before the

Ford partnership was announced.

While the alliance with the American manufacturer should help, it's unclear whether Horner's comments represent a genuine concern for the future of Formula 1 – or a fear for his own team's competitiveness.

Either way, if Horner's goal is to get the regulations changed, it's going to be extremely difficult to achieve – after all, it's thanks to these regulations in their current form that F1 was finally able to lure in Audi and persuade Honda to make a U-turn on its way out of the series.

"That's not going to happen. Zero chance: capital letters," insisted Wolff, assessing the odds of Horner's lobbying succeeding. "So I don't know why these things are coming up. We've developed these regulations over many years, with all the auto manufacturers being involved.

"Is it challenging? Are our chassis designers saying: 'Well, how are we going to do this?' Yeah. But [that's] super. These regulations aren't going to change anymore. They're not going to be postponed anymore, because the world needs to show innovation around sustainability. We need to reduce emissions. And we're super excited."

F1 chiefs insist that the competition won't suffer, claiming the concerns raised by Horner will only manifest themselves if the cars exhibit the same high levels of drag as the current generation. It says the technical working group tasked with drawing up the final version of the rules has made serious progress with its own simulations and believes the fears are unfounded.

This view is shared by Alpine boss Otmar Szafnauer, who has stated that his engine department sees no point in changing the rules.

"We're happy to keep it as is," he said. "So I would imagine it's going to be unlikely that it's changed. I remember being in all the meetings

to determine what the regulations are now, and everybody, including me, said all the racing is going to be horrible, all the cars are going to look the same, it's not going to be F1 anymore, and all that. That really didn't happen."

This is a common occurrence in F1: engineers often claim that rule changes will have disastrous consequences – and more often than not end up disproving their own predictions. However, the last time F1 embarked on such a major change in powertrain design – 2014 – it was far from smooth: not only were there huge differences between the engines of different manufacturers, but the cars themselves would give Frankenstein's monster a run for its money in terms of ugliness. A repeat of such a scenario – especially at a time when F1 is seeking to demonstrate its ability to develop new technologies that will help the drive towards a sustainable future – would best be avoided. ►

RICCIARDO ROCKS UP AT TEAM HE LEFT IN 2013

02 Red Bull has long accustomed the public to seeing its first-team drivers return to the junior squad, but no driver has ever taken such a long and hilly route back to the Faenza outfit as Daniel Ricciardo. It took him almost 10 years to return to the team he had left in 2013.

A year and a half ago, the idea of Ricciardo racing for AlphaTauri would have been unthinkable – the Australian’s first season with McLaren hadn’t been easy, but the victory in Monza smoothed things over. But now, after being destroyed by Lando Norris in 2022 and having spent six months without a race seat, Daniel had one good chance to return to the grid: Red Bull’s sister team.

The decision to drop Nyck de Vries 10 races into the season seems harsh but, at the same time, understandable. De Vries, who impressed last year when standing in for Alex Albon in the Williams at Monza, has failed to live up to Red Bull driver guru Helmut Marko’s expectations. Before the start of the season, Marko said he expected the Dutchman, who has Formula 2 and Formula E titles to his name, to become team leader – but in reality de Vries hasn’t been able to match team-mate Yuki Tsunoda. Rumours of a possible parting of the ways circulated in the spring and came to fruition when Nyck’s contract was terminated after the British GP, where he finished last.

Explaining the decision to release de Vries, Marko stressed it would have been wrong to view him as an ordinary rookie, given his experience in other categories.



Ricciardo drove a Red Bull at the recent Pirelli tyre test (top). His last race for AlphaTauri (then Toro Rosso), was the 2013 Brazilian GP (above) where he finished 10th

“He is 28, has a lot of experience and has also been able to gain a lot of knowledge as a test driver in multiple Formula 1 cars,” Marko told the Dutch newspaper *De Telegraaf*. “You can’t compare him with a young rookie in my opinion. Unfortunately, he didn’t do one super lap that really amazed us. Nyck is a very nice guy, but the speed just wasn’t there.”

A seat in a team entrenched at the bottom of the constructors’ standings hardly seems exciting for an eight-time grand prix winner, but Ricciardo may well see it as an audition for a Red Bull drive. More importantly, the opportunity to jump into the worst car on the grid mid-season was probably a ‘now or never’ choice for Dan to put his foot in the closing F1 door. Red Bull’s plans could have changed by the winter and Ricciardo would have had to compete for a seat with Liam Lawson, who has been successful in Japanese Super Formula this year.

The move has also allowed Marko to put pressure on Sergio Pérez, who has had a string of disastrous qualifying performances after a successful start to 2023. And while both Marko and Red Bull team principal Christian Horner say Pérez’s place in the team isn’t in jeopardy, they’ll be keeping a close eye on Riccardo – since he appears to be the only realistic candidate to replace Checo.

Having signed the experienced Mexican three years ago, Red Bull, the team with one of the most renowned F1 junior programmes, has not only failed to find a potential replacement for Pérez from within its own ranks, but ended up signing a 28-year-old ex-Mercedes reserve driver for its ‘junior’ team. And it has now replaced him after 10 races with the 34-year-old Riccardo. ▶

NEWS IN BRIEF... NEWS IN BRIEF...NEWS IN BRIEF...

CALENDAR



FORMULA 1 HAS released its 2024 schedule which, with the return of the Chinese GP, again contains 24 races. The calendar is a first attempt at a more sustainable and logical order of races, although this is still a work in progress.

TELEVISION

Channel 4 and Sky have extended their F1 partnership, due to finish at the conclusion of this season, until the end of 2026. This means live coverage of the British GP, and qualifying and race highlights of all other GPs, will remain on free-to-air TV.

DRIVERS

Mick Schumacher has had his first test for McLaren, at Portimao, as per the agreement between Mercedes and McLaren over shared test and reserve drivers. Driving an MCL35M, the test enabled Schumacher to get used to McLaren’s procedures.

MOVIES

Shooting for the Brad Pitt F1 film started at the British GP. Fictional 11th team APX GP had a garage and pitwall setup and used a modified F2 car for a number of on-track sessions



PICTURES: STEVEN TEE; ZAK MAUGER; MOTORSPORT IMAGES ARCHIVE; RED BULL CONTENT POOL

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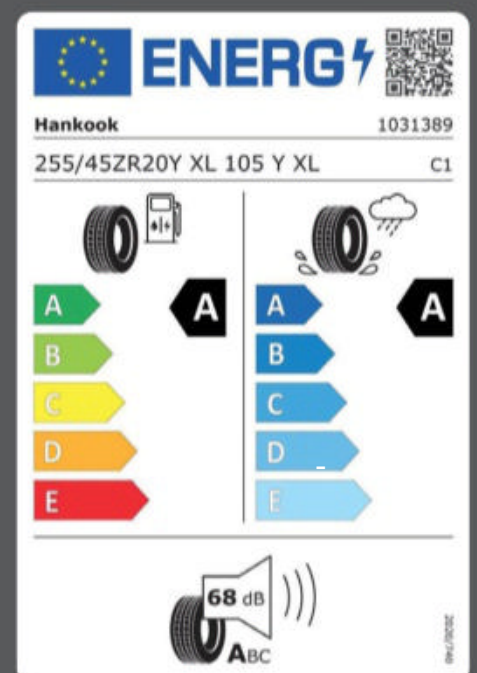
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1) TÜV SÜD Tire Test 2022, Report No. 713252186-BM01, -PM01. Test period March 2022. Test performed on the Hankook Ventus iON S with four competitor tyres, in in the size 245/45 ZR19 102Y XL. Test vehicles: Tesla Model S 85, Tesla Model S P100D, Audi Q5 Sportback 40 TDI, VW Tiguan 2.0 TDI. Test location: IDIADA, Papenburg, Neubiberg, Garching. Applies to all further mentions of the TÜV SÜD Tire Test.

ALPINE'S VALUE GOES SKY HIGH

03 Remember when Formula 1 teams could be sold for the ludicrous sum of \$1? Well, those days are long gone. The recent sale of a 24% stake in Alpine's F1 Team for \$200 million clearly confirms estimates that F1 teams are now valued in the region of a billion dollars.

A group of investors including three financial institutions, Otro Capital, RedBird Capital Partners and Maximum Effort Investments, bought just under a quarter of the team's shares. Such deals aren't uncommon in F1. Mercedes, for example, has three shareholders: Daimler, Toto Wolff and Sir Jim Ratcliffe's chemical company INEOS each hold a 33% stake.

The deal to sell a stake is perceived in the paddock as a confirmation of Renault's long-term commitment to F1, rather than a desire to offload the team. The aim of the deal, instigated by Alpine CEO Laurent Rossi, is to strengthen its foothold in "media, sponsorship, ticketing, hospitality, commercial rights management, licensing, and merchandising strategies to unlock incremental value creation and new growth levers".

In other words, the team has found not just another co-owner, but a partner to help activate its marketing potential.

"They're going to help us on the monetisation side of the business," said Rossi. "So strictly speaking, not on the sports side. People here [at Enstone] know what they're doing. People in Viry know what they're doing. They're going to continue doing what they're doing. They [the investors] are going to help us boost our revenue, hospitality, sponsoring, licensing, merchandising above and beyond what we had planned."

Maximum Effort Investments was co-founded by actor Ryan Reynolds and describes its remit as "unlocking value through the power of storytelling". Reynolds and co-investor Rob McElhenney brought the previously obscure Welsh football club Wrexham FC to international fame after buying it in 2020 and making a TV series about it. *Creed* actor Michael B Jordan has joined their Alpine buy-in and a TV series centring on the team is expected to follow.

There have also been changes at Alpine on the sporting side. Rossi has appointed former Alpine F1 engine chief Bruno Famin as VP of Alpine Motorsports. Famin will oversee all the company's motorsport activities, including F1, sportscar racing and rally-raid efforts. He will also oversee the Alpine Academy, the company's young driver programme. The change in structure means that Alpine's F1 team principal, Otmar Szafnauer, now reports directly to Famin.



In addition to the recent financial investment into Alpine Bruno Famin (top) will now oversee all of Alpine's motorsport activities, including F1

**IN OTHER WORDS, THE TEAM HAS
FOUND NOT JUST ANOTHER CO-OWNER,
BUT A PARTNER TO HELP ACTIVATE ITS
MARKETING POTENTIAL.**

F1 MASTERMIND

Your chosen specialised subject:
the world's greatest motorsport

- Q1** Which three Australians have qualified higher than Oscar Piastri for the British GP?
- Q2** Who was the last driver to win an F1 race on Bridgestone tyres and which race was it?
- Q3** Which GP was won by Peter Gethin in 1971 and not again by a British driver until 1991?
- Q4** Nick Heidfeld and Robert Kubica were full BMW team-mates from 2007 to 2009, but who scored the most points during that time?
- Q5** George Russell has failed to finish a race how many times when driving for Mercedes?
- Q6** Who am I? I started 146 GPs between 1972 and 1982 for Brabham, Ferrari, Lotus and Williams, winning 12 times with six pole positions.
- Q7** How many times has the Belgian GP previously been held in July: 0, 3 or 5?
- Q8** True or false: Fernando Alonso, Lewis Hamilton and Daniel Ricciardo are the only current race drivers to have won the Chinese GP?
- Q9** Six British-born drivers started the 1995 British GP, won by Johnny Herbert. Who were the other five?
- Q10** Derek Bell started only nine GPs, but at which race did he score his solitary point?



1 Jack Brabham, Alan Jones, Mark Webber **2** Sebastian Vettel, 2010 Abu Dhabi GP **3** Italian GP **4** Heidfeld, 140 points to 131 **5** 4 Carlos Reutemann **7** 0 **8** True **9** Mark Blundell, Martin Brundle, David Coulthard, Damon Hill, Eddie Irvine **10** 1970 US GP at Watkins Glen

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The points loss failed to deny Leclerc the F2 title later in the season and he was elevated to F1 in 2018. Signed up by Frédéric Vasseur for Sauber, Charles scored his first points in Baku but with a hat-trick of zeroes leading up to the summer break, the return to Spa was an opportunity to reset. Practice went well, qualifying less but the race was key. That is until the first corner, when all he could see was the base of Fernando Alonso's McLaren skating over his head. It was the first year F1 was obliged to carry halo cockpit protection and the accident initiated by Nico Hülkenberg running into the back of Alonso gave us a clarifying view of the significance of the halo to driver safety. On one hand it was a blow to witness Leclerc's short race, on the other it was a huge bonus to see him step away unharmed.

While Charles was becoming familiar to the see-saw effects of a track which has hosted grand prix racing since 1925, nobody could have predicted the troughs and peaks of 2019. On Saturday 31 August, the talented F2 racing driver Anthoine Hubert died as a result of a crash at Raidillon. He'd grown up in the world of karting with Pierre Gasly, Esteban Ocon and Leclerc and he was much liked. It was a devastating moment, occurring while Leclerc was still being

interviewed for the pole he had achieved in the Ferrari less than an hour before the crash.

The loss of Hubert made Saturday evening and Sunday morning a sombre spell, but the event continued. Leclerc delivered a strong start while team-mate Sebastian Vettel was battling to hold onto second from Lewis Hamilton. For once, Ferrari played sensible tactics; an early stop for Vettel ensured he stayed ahead of Hamilton after all three part-time leaders had pitted, and Seb's smart use of the Ferrari's straightline speed prevented Hamilton from overtaking until the latter stages. Leclerc was now under increasing pressure, but a batch of backmarkers gave him a breather and he held on from Lewis by less than a second to take his first-ever win in F1.

It was a remarkable moment. At 21, Leclerc had just emulated racing heroes Michael Schumacher, Jim Clark and Peter Collins by using Spa to earn a first GP victory. Yet the downside of what had happened to his friend, and to whom he dedicated the win, made the weekend far more than a rollercoaster.

Since then Leclerc has not had a good result in Belgium. Ferrari was uncompetitive in 2020, and there was the rain-deluged 'race' of 2021. Last year he was hit by grid penalties for additional power unit elements, while the frustration of Max Verstappen's tear-off visor strip invading his brake cooler and leading to a penalty for speeding in the pitlane was typical of the ebb and flow of Spa. The time is right for a boost at such an unpredictable venue.

WHY LECLERC IS DUE A RESET IN SPA

Spa-Francorchamps is a rollercoaster, not only in topographic terms. Descending into Eau Rouge and climbing steeply through Raidillon then rolling downhill from Les Combes to the base level out of Pouhon, the sections give drivers a physical sense of the ups and downs of motorsport. But it's also a track which has seen emotional highs and lows for many drivers; Charles Leclerc is a key example.

Charles began his single-seater career in Formula Renault in 2014 and raced at Spa on subsequent weekends in two different championships. The first was a downer: he qualified out of the top 20 for both Eurocup races, with a best finish of 26th. Less than a week later he achieved two podium finishes in the Alps series, finishing one of the races just 1.6s behind Nyck De Vries who would become champion in both categories at the end of the year.

Leclerc's performance at the Belgian venue was on an upward trajectory and that was confirmed a year later when he won the first of the FIA F3 European Championship races held over another June weekend, and scored well in the other two.



2021 was a washout for everyone.

Leclerc was unable to improve on his starting position of eighth

By the time he was racing GP3 in 2016, the circuit had become a key favourite and he followed pole position with victory despite a tricky weekend managing soft Pirelli tyres in high temperatures. That win, plus a sixth-place finish from the partially reversed grid race, helped to extend his title lead over Alex Albon from three points to 36.

When Spa appeared on his F2 calendar in 2017, Charles had a 50-point lead over Oliver Rowland but in practice the fire extinguisher in his cockpit went off. He lost valuable track time but qualifying turned into a new game as the rain began to fall; he snatched his seventh pole of the season and, despite a dry track for the race, he grabbed the lead and took a comfortable win. Or so he thought. That evening everything shifted as scrutineers discovered a worn underfloor and his win was wiped out. Up and down, the cycle was continuing.



Leclerc's F1 debut at Spa in 2018 was brought to an abrupt end on the first lap when Fernando Alonso flew over his Sauber



GP3 in 2016 was the second time Leclerc had stood on the top of a podium at Spa, having won there in F3 the year before



Leclerc passed Alonso on the final lap in 2022 to take fifth, only to be hit with a penalty for speeding in the pitlane



His first F1 win in 2019 was tinged with sadness after the death of his friend Anthoine Hubert



Leclerc was well down the field in 2020, driving the uncompetitive Ferrari SF1000



Leclerc thought he'd won in F2 in 2017, only to lose the victory due to a technical infringement



UNDER THE HOOD

PAT SYMONDS

PICTURES **motorsport** IMAGES

must be at least 300mm behind the front bulkhead as well as being behind the front wheel centre line. Their safety is vastly improved from those early days by the numerous tests to which the monocoque and front impact structure must be subjected.

These prescriptions don't, however, preclude some changes to driving position. I was reminded of this when Lewis Hamilton complained the position in the Mercedes W14 earlier this year was too far forward and it was affecting his feel of the car. He commented that when driving, he felt like he was sitting on the front wheels. He went on to say that this is one of the worst feelings to have when driving.

More precisely he said: "What that does is it just really changes

the attitude of the car and how you perceive its movement. It makes it harder to predict compared with when you're further back and you're sitting closer, more centre. It's just something I really struggle with."

This is something I fully agree with and the position of the driver is remarkably important in the perception they have when driving. Driving a car is like being the controller in a control system. As a driver you get inputs from the car by means of the steering wheel and the 'seat of your pants' as well as some visual and aural feedback. You process this and apply controls to the engine torque, the brakes and the steering wheel to get the path following you require while pushing for maximum performance.

To get that feedback several things need to be right and if we look at the seating position we consider what vehicle designers term the 'H point'. This is positioned at your hip joint and is the most important reference datum in the layout. For road car designers they take this for a 95th percentile human male. While that may sound sexist it actually covers 97.5% of the male and female population. The road sports car designer will try and place the H point as low as they can and use what's known as the accommodation curve to place the pedals such that they are around 134mm below this. Longitudinally they will try and place the H point at the centre of yaw but of course this isn't always possible. In an F1 car the feet are actually above the H point although this seems to make little difference. The longitudinal position, however, is important. The natural ►

HOW PROPER POSITION PREVENTS POOR PERFORMANCE

Ergonomics, the study of how design features improve people's efficiency in their working environment, isn't a word often associated with motorsport. It is however a fundamental part of the process of designing a vehicle. It sits alongside packaging as the starting point for what is popularly known as the architecture of the vehicle.

The modern Formula 1 car is certainly a triumph of packaging. The complex power unit and all its associated systems are contained within extremely narrow confines so as to allow the engine cover and the diffuser 'boat tail' to be pulled in as far as possible to enhance the aerodynamics.

The position of many elements are largely dictated by the regulations these days but this hasn't always been the case. In the last ground-effect era the drivers were pushed forward with their feet only protected by the rather flimsy nose box. This was particularly true of the turbo-engined



The position of the driver in a modern F1 car (above) is more defined than it was in the last ground-effect era when they were pushed forward (below)



cars which had a much larger fuel tank than those using the Ford Cosworth engine.

These days the position of the driver in the car is much more defined and, for example, their feet

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Hamilton (bottom) was definitely further forward than both Verstappen (top) and Leclerc (below) earlier in the season

layout of an F1 car will always place the driver's hips close to the yaw centre but small variations can make a difference when you're exploring the limit. If the H point is at the yaw centre the driver will feel a pure rotation about a vertical axis through his body. If he's displaced from the yaw centre he will feel rotation and side movement simultaneously, which is harder to process.

There are many factors involved in controlling the car and I've always found my analogy of regarding the driver as the controller in a control system useful. When I first joined Williams the drivers were complaining the car had poor traction. I found the total throttle pedal travel was just over 20mm. An increase to 50mm improved traction because the driver could control the system better. I had, in control terms, done what's known as reducing the proportional gain. To the driver, I had made the engine torque less sensitive to his exact foot position.

Steering too can be a major factor in car control. In a road car, at the limit, a typical

steering torque might be 5 to 10 Newton metres (Nm). In a Formula 1 car, because it has power steering, the steering isn't much heavier. F2 and F3, however, even though they don't have the same cornering capability, have heavier steering which reaches as much as 20Nm in fast corners. In itself, provided the driver has enough strength to correct the steering, this isn't too important. What is more important is that the steering is free of friction and free play and gives repeatable feedback to the

THE NATURAL LAYOUT OF AN F1 CAR WILL ALWAYS PLACE THE DRIVER'S HIPS CLOSE TO THE YAW CENTRE BUT SMALL VARIATIONS CAN MAKE A DIFFERENCE

driver. The control engineer would understand how these factors would affect a control loop.

So was Lewis right? Inspection of photographs certainly show his head is further forward in the car than Max's head is in the Red Bull. But equally, so too is Alonso's head forward in the Aston Martin while Norris in the McLaren is positioned further back, in a similar position to Max.

The answer, as always in F1 design, is never simple and rarely down to any single element.

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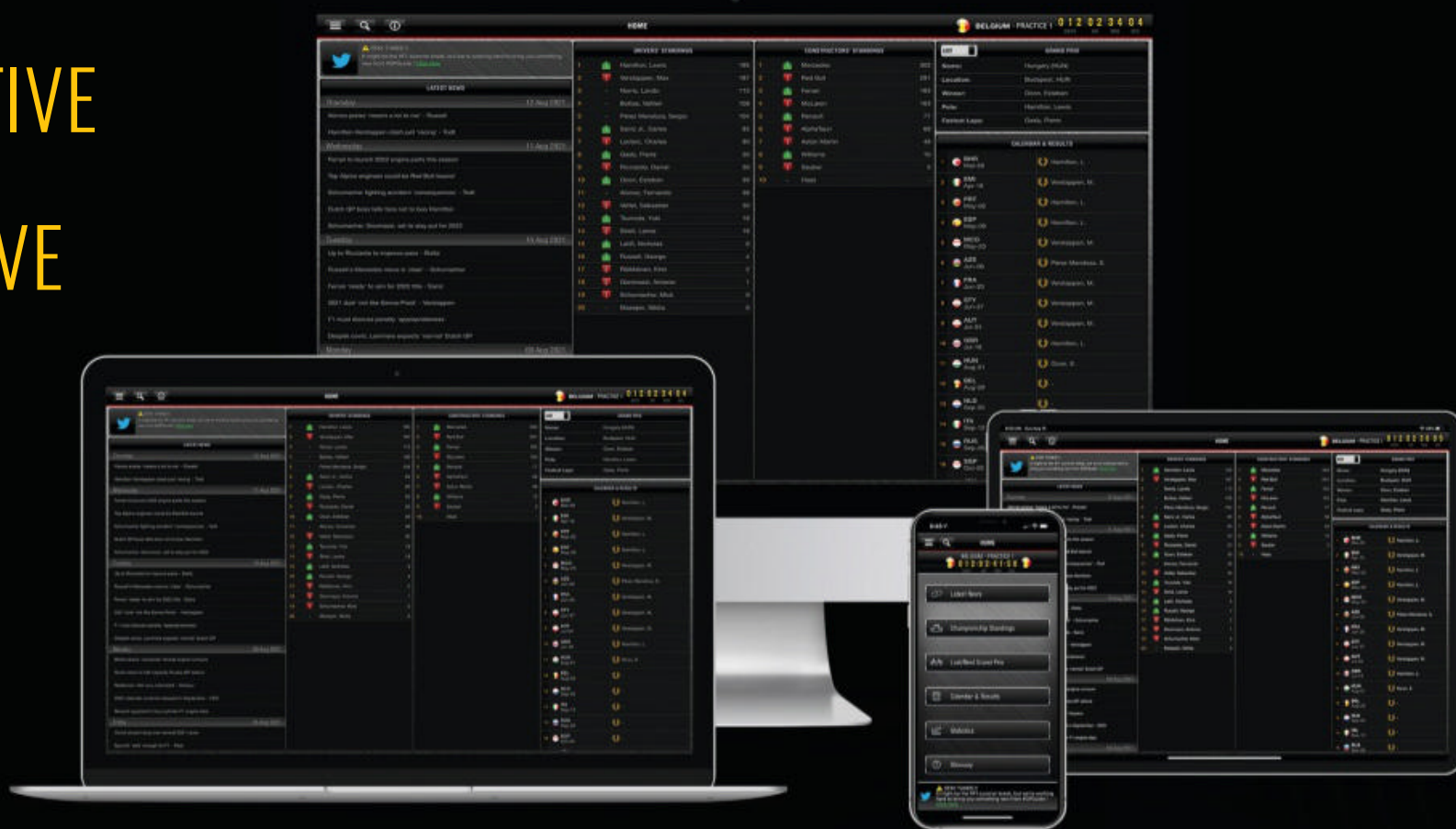


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STRAIGHT TALK

MARK GALLAGHER

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support in respect of powertrain technology. While Ferrari, Mercedes and Alpine will continue as they are, Red Bull will commence its Ford-supported Red Bull Powertrain programme and Audi will be Vorsprung Durch Technik-ing at the team formerly known as Sauber.

All being well in Sakura, Honda should unquestionably provide Aston Martin with a competitive power unit, but it's hard to imagine anyone at the other five companies is planning for failure. The big fear has to be that we see a repeat of the birth of hybrid powertrains in 2014 when, against the best intentions of the FIA's working group, one manufacturer came up with a highly innovative design and ran away with the ball.

Mercedes simply did a much superior job, leaving the rest to thrash around, work out what was happening and play catch-up.

With six manufacturers lining up in 2026, the stakes are even higher. For those eager to win, second or third feels bad. What sixth will feel like is concerning. It's hard to see any manufacturer who finishes that far back opting to stay. Unless it's Ferrari.

Behind these six lie the orphaned privateers, AlphaTauri,

Haas, Williams and McLaren. Bereft of a manufacturer parent, adopted as customers in return for a wedge of money, they must recognise that any chance of winning will fade to zero.

Speaking to a Honda source, while a return to McLaren was unthinkable, Williams could have been a possibility had things, including the team's leadership and interests, been different.

Ultimately the decision to go with Aston Martin was an easy one, reinforced by the team's early season form. It also helped that Aston had an owner with the bullish chutzpah of Lawrence Stroll supported by the shrewd guidance of Group CEO Martin Whitmarsh, an old hand at these deals.

While Audi looked at British teams prior to settling on Sauber, the one that got away, of course, was its sister company Porsche. In a different time and place, Williams and McLaren would have been all over that deal, but when Red Bull rejected its advances and the unattractive offer of a controlling relationship, Porsche fully retreated.

Whether Honda can continue with Aston Martin in the same form in which it will leave Red Bull remains to be seen, but the additional barrier to success that creates for non-manufacturer teams is notable. While both Williams and McLaren profess themselves happy to continue as Mercedes customers, the prospect of competing against half a dozen manufacturer teams must weigh heavily on their shoulders.

THE JOY OF SIX: IS THE ENGINE FUTURE BRIGHT?

Honda's decision to switch the volume control on its on-off Formula 1 strategy back up to full in 2026 raises interesting questions. Given Aston Martin's impressive form this year, will it be an Aston Martin-Honda that breaks firmly into the winner's circle in the new era, winning championships and ending the duopoly enjoyed by Mercedes and Red Bull?

A domination which, with Brawn-Mercedes included, is now 15 years old.

The Japanese company has learned much since remarrying McLaren in 2015, divorcing three years later, then decamping to Red Bull where it started winning races and world championship titles. However, the competitive landscape within which Honda will partner Aston Martin in 2026 is rather different to now, or indeed the one in which the Aston Martin-sponsored Red Bull-Hondas came to prominence by winning a couple of races and finishing runner-up in the constructors' championship in 2020.

Six of the teams will have full manufacturer



Honda and Audi are two of the six engine manufacturers confirmed for 2026. Honda is teaming up with Aston Martin, but Audi will be entering its own team by taking over Sauber

WHERE'S YOUR HEAD AT?

If Charles Leclerc's sheer bravura calls to mind the legendary Gilles Villeneuve, a more troubling comparison looms: the absence of a world title to add to Ferrari's trophy cabinet. But while team and car have well-publicised shortcomings, Charles might just – whisper it – be unwittingly part of the problem...

WORDS ALEX KALINAUCKAS PICTURES  AND FERRARI



As Formula 1's summer shutdown enforces a three-week break from Max Verstappen and Red Bull's domination of the current campaign, rivals will have much to ponder. One such is Charles Leclerc, for whom the prospect of winning the world championship has grown even more distant after another error-strewn season. The choices he makes in the coming months are likely to define his career, especially the question of his ongoing relationship with Ferrari.

While clear fractures have developed between Leclerc and the team, there's no doubting the power of the almost mystical connections tying him to Ferrari. Think back to last October's Singapore Grand Prix, a rare slip-up for Max when Red Bull cost him a front-row start by under-fuelling him in qualifying and Verstappen then botched the recovery. While Sergio Pérez maintained Red Bull's honour by winning, it was Leclerc who stole the show. Having blown his ninth (and final) pole position of 2022 with a poor start to the rain-delayed race, Charles spent

two hours trying to make amends – throwing his Ferrari around the tricky street course with wild abandon, the frustration of gifting Pérez the lead evident in every snappy steer.

Sideways, here there and everywhere, but to no avail. A glorious defeat.

While some refuseniks scoff at the very idea, it's not hard to see why even those charged with running Ferrari have drawn comparisons between Leclerc and Gilles Villeneuve. Sure, modern F1 machines don't go sideways quite so often as in

the Canadian's day, but Leclerc sure has forged a similar 'win or bust' reputation.

"Being [part of] Ferrari is somehow trying to enhance the myth of the cavallino [Ferrari's prancing horse]," former team principal Mattia Binotto said of Leclerc after Charles had driven Villeneuve's 1979 312T, as part of a Fiorano event marking the 40th anniversary of Villeneuve's untimely death. "There are only few drivers capable of doing that. I think Charles is one of these, as was Gilles."

What went down in Singapore provides a handy metaphor for Leclerc's current predicament. There, his exciting efforts followed an unfortunate start in wet conditions, a big opportunity blown given the scale of Red Bull's 2022 advantage once it lightened its RB18 and ►

Leclerc is loved by Ferrari and has earned comparisons with Villeneuve (left), but he has a contract decision looming





Leclerc claimed his ninth pole of 2022 in Singapore (above) but after a botched start (right) spent the rest of the race throwing his car round with abandon. In Baku this year he was on pole for both the sprint race and GP (below)



Ferrari had to adapt its F1-75 to meet the mid-season porpoising alterations. In 2023, after Binotto was ousted in favour of Frédéric Vasseur, Ferrari has remained operationally sketchy at times and a certain captivating wildness in Leclerc's on- and off-track actions has followed.

Is Leclerc causing his own problems?

It's been a painful season from the off. Charles threatened pole in Bahrain and briefly stole second from Pérez but was then badly adrift even before an engine problem cost a certain

third and led to a Jeddah grid penalty. Then, in Australia, Leclerc misjudged his car positioning on the opening lap and was pitched into the Turn 3 gravel by Aston Martin's Lance Stroll. A pair of poles in F1's first 2023 sprint event in Baku actually included another crash – on the final run of the sprint shootout qualifying – and two further hefty Red Bull defeats. These were soothed somewhat by Leclerc's first rostrum visit this term following the main event.

A Q3 crash while chasing another pole in Miami then ripped out the momentum he'd finally started building, and his recovery drive in the race was underwhelming. In Monaco Leclerc

demonstrated his searing speed and breathtaking bravery again to end up just 0.1s from Monaco pole behind Verstappen and Fernando Alonso, but he started sixth because he'd impeded Lando Norris – unwittingly, because Ferrari had failed to warn him the McLaren was approaching. Then came successive failures to reach Q3 in Spain and Canada, but only in the latter did Leclerc mount an impressive fightback, heading team-mate Carlos Sainz in fourth.

Canada was an important season milestone. There Leclerc revealed a factory investigation into why he hadn't been able to escape Q1 in Barcelona had found nothing wrong with his car. Logic



therefore suggests the responsibility lies with Leclerc himself – staggering for a driver whose single-lap skills and ability to prepare the car properly for a qualifying push are so often hailed as their greatest asset.

But also in Montréal, Leclerc unloaded in the media after Ferrari's Q2 tyre strategy conservatism backfired. In drying conditions the team asked him to set a 'banker' lap on inters before changing to slicks; it ultimately wasn't fast enough and the rain's return scuppered his efforts on slicks.

"I had a clear opinion and a clear intuition, and we went for something opposite," he said. "We are

"I HAD A CLEAR OPINION AND A CLEAR INTUITION, AND WE WENT FOR SOMETHING OPPOSITE, WE ARE JUST MAKING OUR LIFE WAY TOO DIFFICULT" Charles Leclerc

just making our life way too difficult."

Even more damningly, he also called the drama a "shitty situation". But Vasseur would later insist that such comments were understandable in the adrenaline-charged post-session moments – and that Leclerc had later said, "OK, I was wrong." Yet the damage-control steps were obvious.

Leclerc lost the 2022 world title because Ferrari

failed to keep pace with Red Bull's development despite a car concept which seemed to have much promise. Although his two in-race crashes hurt his score, the team's various dramas squandered six chances to add further success to the two victories Leclerc registered in that campaign's first three events. Repeated strategy and car failings meant he ended up with just one ▶

further win – in Austria.

This time around, Ferrari's car is no closer over a race stint. And, whereas in 2022 the F1-75 led the way on one-lap pace, this year Red Bull's RB19 is the clear class leader on all fronts. Aston Martin can now deprive Ferrari of points, as can the rebuilding Mercedes squad. Ferrari has tried to address its misfortunes by finally switching to a Red Bull-style sidepod concept (see p38), but too often Leclerc and Sainz are still frustrated by poor race pace, caused by excessive tyre degradation when they push on or engage in battle. And still the strategy frustrations rage.

Should Charles quit Ferrari?

Enter Villeneuve again. Not just in F1's hive brain because of the bizarre saga which surrounded Leclerc running a tribute helmet to his illustrious predecessor during the Canada weekend (he'd failed to notify the family beforehand). But because Gilles actually attempted to escape his own Ferrari frustrations in 1981.

Having grown exasperated by poor reliability, and what he viewed as an inferior car he thought he'd been lucky to win twice in, Villeneuve considered exiting his Ferrari contract. He got as far as agreeing to join McLaren for 1982 via an intermediary – Gerald Donaldson's biography of Villeneuve recounts him negotiating with Ron Dennis via numbers representing his desired salary being placed on a nearby pit board – before backing out. Fear of telling Enzo Ferrari was thought to be the clincher, as well as unease at the ethical dimensions of ending his contract early.

The question many F1 observers are wondering as 2023 progresses is thus: could Leclerc be contemplating a similar step outside his beloved red happy place? After all, given the sheer volume of frustrating moments over the past season and a half, it's clearly not that happy.

Balanced against this is Leclerc's understanding of how highly valued he is within Ferrari – his closeness with company chairman John Elkann is rumoured to have been a factor in the decision to replace Binotto. The Scuderia also made clear it considered Leclerc its leading star when it signed him to a five-year contract at the end of 2019. This was just after his bumpy first season as team-mate to Sebastian Vettel, who was shown the door just a few months later. And, despite his vociferous moments, Leclerc hasn't come anywhere close to Villeneuve's 1981 tirade on home soil (after qualifying nearly 2s off pole position), even though that included a similar line: "there's no excuse".

But now that contract's end is looming. And until an announcement regarding Leclerc's future is made, speculation will only build – made worse by the 2023 campaign crying out for additional narratives as Verstappen's domination endures. In a business as ruthless as F1, it makes perfect sense for a driver to evaluate better options, as Villeneuve once did.

Since there's still a year remaining on Leclerc's current deal, both sides are tight-lipped on negotiation developments, bar Vasseur saying after Australia that "we'll have time to discuss it" and "I'm not scared at all" – about the possibility of his driver jumping ship. Rumours flew at that stage of the season that Mercedes might be a possible Leclerc alternative, only for these to be scotched by Toto Wolff. But he nevertheless teased that Leclerc is "a super guy and, for the long-term future, someone you need to always have on your radar". But Wolff added, "not for the short and the medium-term". Leclerc



then revealed in Austria that he and Ferrari are "slowly" starting "to speak about it [a new deal]".

"I don't have any particular deadlines," he added, with Sainz having stated pre-Austria that he wanted his own Ferrari future sorted this winter. "I still feel like a year-and-a-half is a long way to go. It's not really on my mind yet. When I say we slowly started talking about it, it's just here and there. But nothing special, nothing specific."

And here is the wider predicament facing Leclerc, leaving both his and Ferrari's failings to one side. Where Villeneuve was briefly considered among F1's best – a perception boosted by his rise coming between the dominant eras of Niki Lauda and Alain Prost and Ayrton Senna, plus his story being tragically cut short – Leclerc is competing in the Verstappen age while Lewis Hamilton's is ▶

Toto Wolff (below) has, for now, ruled out Leclerc becoming a Mercedes driver in the short and medium-term

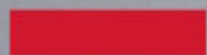


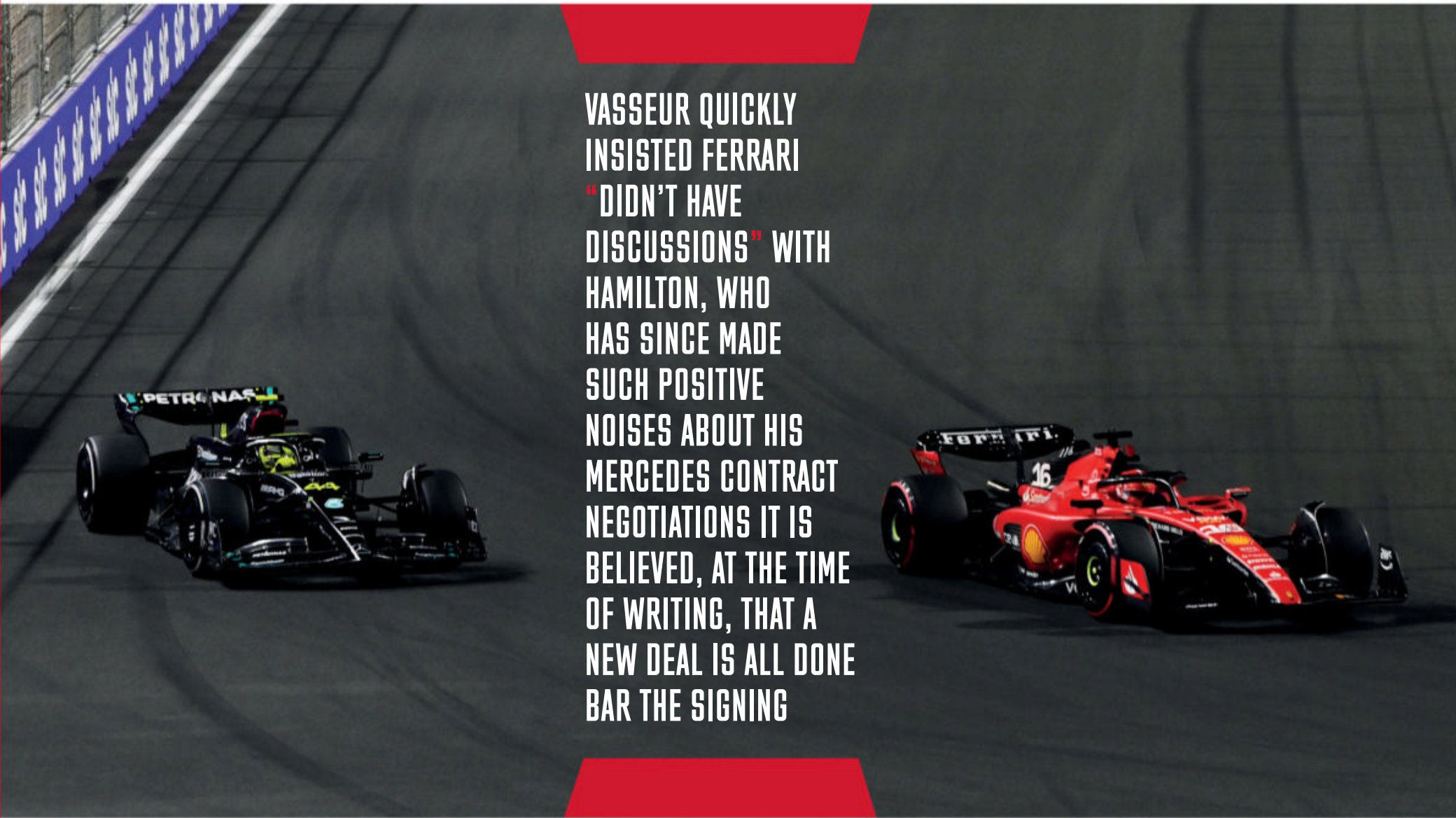
After a poor 1981 Villeneuve (below) got as far as talking numbers with Ron Dennis to try to get out of Ferrari

Vasseur (below) is confident of retaining the services of Leclerc after his current contract expires in 2024



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still to fully conclude.

This, more than anything, caps the Villeneuve comparison – even if Leclerc’s dramatic driving can instil similar passion in Ferrari fans. The current positions of both Verstappen and Hamilton, who races alongside long-time Mercedes junior George Russell, appear to leave Charles with no path to either Red Bull, which is focused Verstappen, or to the Silver Arrows. Aston is loving Alonso as much as he seemingly does back and there’s little chance Lawrence Stroll will eject his son from the second green seat, even if, as it has so far this campaign, this costs constructors’ championship points.

The Hamilton question

Hamilton was the subject of rumours regarding a possible approach from Ferrari just before Monaco. That would be a box office move for F1 – at a time where Verstappen’s incredible run risks puncturing the boom incited by *Drive to Survive*. In another era it wouldn’t be hard to imagine Bernie Ecclestone going to work to make such a move occur, and Hamilton has fuelled speculation by being openly complimentary about the Italian team and its illustrious history.

In reality, both sides of this tantalising possibility quickly moved to downplay that story.

Vasseur quickly insisted Ferrari “didn’t have discussions” with Hamilton, who has since made such positive noises about his Mercedes contract negotiations it is believed, at the time of writing, that a new deal is all done bar the signing.

That still doesn’t remove the possibility of circumstances changing very fast. But the current situation would appear to leave Leclerc with two options – the first much less likely than the second. That is, switching to Mercedes to join his friend Russell, should Ferrari really move to sign Hamilton for 2024.

That scenario would require a lot of shifting from all parties but is not impossible. Hamilton is unlikely to make a Nico Rosberg-like retirement decision, given his burning desire to help Merc recover and then wrest the crown back from Verstappen. Add to this, one of Leclerc’s weaknesses appears to be acquiescing to Ferrari too readily during on-track strategy calls – it cost him at least a podium in the Monaco shambles last year and a Q3 berth back in Canada.

So, while Charles might have Elkan’s ear and is “not a spectator” in Ferrari’s rebuild, as Vasseur says, making such a potentially career-defining move would appear to go against his nature. That rebuild includes awaiting the arrival of several so-far-unnamed aerodynamicists from teams including Red Bull, while former head of vehicle

concept David Sanchez and sporting director Laurent Mekies prepare for life at McLaren and AlphaTauri respectively.

Therefore, the second path for Leclerc is more obvious – especially if Hamilton is signed to a multi-year Mercedes deal that would put him towards the 2028 territory where Verstappen’s current Red Bull deal is set to end. This would entail sticking it out with Ferrari for the medium term. In doing so, Charles would further cement his status with the Tifosi – ideally living up to ▶

One scenario could be Hamilton moving to Ferrari and Leclerc joining his friend Russell at Merc. But it’s a long shot..





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WHY FERRARI COPIED RED BULL



And, just like that, the wonderful variation in Formula 1 chassis design at the start of the new ground-effect era is over.

Aston Martin started it, going down the Red Bull downwash sidepod path just six races after introducing its initial 2022 design. As the months ticked by, the rest followed – to a greater and lesser extent. Mercedes, most notably, decided to ditch its distinctive ‘zeropod’ approach to upper aerodynamic surfaces once it was

fully revealed that the W14 was no closer, really, to the front than its porpoising predecessor (see p42).

That just left Ferrari and Haas, which, at the time of writing, is now the only team not running a car with Red Bull-esque sidepods. In Spain, Ferrari surprised many by adding its own version of what is now a rather uniform style. Out were the deep, louvred inwash-inducing surfaces, and in were sidepods with a slightly stunted downwash ramp, along with tweaks to the

floor, mirror mounting and engine cover.

This was unexpected because in early April, when it was already clear the SF-23 trailed Red Bull’s class-leading RB19, team boss Fred Vasseur had plainly stated “we won’t come with something completely different” and that the plan for 2023 updates didn’t include what he defined as “a B-car”. Herein lies the gulf between how F1 engineers and the general public view cars. Sidepods aren’t

the critical performance differentiator in a ground-effect formula. But getting them right can be a powerful tool in boosting the floor, which is – by directing more air towards the diffuser.

Those are important factors of assessing the current car generation. Vasseur is adamant that taking the “tough decision” to change the SF-23’s top surfaces will yield a higher development ceiling.

The initial results of this big change in terms of outright pace were

hampered by unusual qualifying circumstances.

Yet Carlos Sainz still qualified second in Spain, which helped Ferrari maintain its position as Red Bull’s closest challenger in terms of quickest laps logged over a weekend (which usually come in qualifying). But Sainz suffered badly with race tyre life and fell to fifth. Next time out in Canada, lower temperatures allowed the Ferrari drivers to “show a bit more our true pace”, as Sainz said, and climb the ranks from a

disrupted qualifying to finish fourth and fifth.

This remains Ferrari’s central problem – it can’t yet totally replicate Red Bull’s stable platform. The additional sliding in corners, exacerbated by prioritising drag reduction, means it works its tyres very hard. This is a boost in terms of firing up rubber in qualifying, but in race stints it is a handicap. And the car’s peaky aero also means its drivers are catching ever more slides and so straining their tyres further.

IF STAYING PUT AT FERRARI IS LECLERC’S MOST LIKELY FUTURE, IT WILL BE IMPORTANT FOR HIM TO REFLECT ON HOW THINGS HAVE TRANSPIRED SO FAR IN 2023


the “magnanimity and daring” in Villeneuve’s reputation that Enzo Ferrari highlighted at 1982’s sad conclusion. Plus, Leclerc would be able to watch contract developments play out elsewhere – including Audi building its new entry out of Sauber/Alfa Romeo.

There is no Ferrari junior pushing for promotion, as Leclerc once was when Kimi Räikkönen’s days in red wound down in 2017

and 2018. Sainz has performed well at times this season, but again he’s lacked the true headline results his team-mate can usually conjure, as was the case during the 2021 season when Leclerc provided Ferrari’s clearest chances to snare an against-the-form victory.

If staying put at Ferrari is Leclerc’s most likely future, it will be important for him to reflect on how things have transpired so far in 2023.

His early season errors evoked memories of his worst mistakes back in 2020, where the effects of Ferrari’s “confidential settlement” with the FIA over its engine technology led to Charles over-reaching for grid spots and race positions in a car which was lacking performance. This led to several bad crashes – including taking Vettel out in the second Austrian race and triggering a multi-car crash in the Sakhir GP.

It may involve another kind of pain, but making sure he is playing no part in Ferrari’s deficit to the front could end up being Leclerc’s primary focus as the final two-and-half years of F1’s current rules set play out. Even if that doesn’t bring the title glory he so obviously desires. 

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ESTEBAN OCON

Despite encouraging signs at the beginning of the year Alpine is having a tough time, currently on track to fall well short of the targets it had set. But as Esteban Ocon reveals, there's been plenty happening off-track at Enstone with the aim of turning the performance around quickly...

Alpine has secured a new investment from a group which includes Hollywood actor Ryan Reynolds. How exciting is that?

I think it's fantastic. I was extremely lucky to be able to chat with Ryan, we exchanged a couple of WhatsApp [messages]. He told me I was invited to the set in London for the Deadpool [3] movie. So I'm definitely going to be going! And he also said he was very much looking forward to learning from our world, seeing how things work. I'm a massive comics and Marvel fan in general, and a massive Deadpool fan. And he's just someone who is really inspiring in what he does. Also outside of his acting world, I think he's an extremely talented businessman as well.

One of the benefits of this deal, obviously, is that it comes with an injection of money.

Laurent Rossi said some of that will be invested in Enstone, in the facilities. Where do you think that money needs to be spent? What needs to be added to help turn a good team into a winning team?

We know. I'm not going to go into details, but we know where that needs to go. We want to take the team up there to be fighting for podiums, for wins as soon as possible. That's my aim, as quickly as possible. I'm not here to waste time.

When Alpine first came to F1 a couple of years ago, it was a very small French brand. And now it's growing and growing. Does it now make more sense seeing that brand in F1, and are you excited to be part of it?

Super-excited to be part of the brand. I never thought it was a small brand, because I knew how big the group is. But also, you know, how many

Alpine cars you see on the road nowadays, since Alpine has been in F1, it's expanded massively. There's a big plan to introduce a lot of different models. I'm a big fan of road cars in general. And there are some very interesting things coming as well. I'm very involved in the project, not only in F1 but also on the road car side. And I feel extremely lucky to be part of that as we're developing and moving forwards.

Are you working on road car development?

It's always been my dream to be working so closely with a manufacturer, not only the racing side, but also on the road car side. It's exciting to see how much they're listening to me at the moment when they do things for future road cars. As I said, it's been a kid's dream of mine to be able to do that.

Where do you see Alpine now in Formula 1?

We definitely didn't start the season where we wanted. But we've done a massive step forwards, especially on Saturdays, I feel our qualifying pace is strong. And we're close to where we want to be in that sense. Where we still need, you know, more performance, it's in the races. That's where we need to focus. We know what

we have to do. There's a plan for upgrades through the year, and each time we bring them we've made steps forwards. Obviously, the most visual [confirmation] was [third place in] Monaco, but I hope we can still make more of a step that's going to be as clear as Monaco.

You mentioned that you're almost there in terms of qualifying pace, but still missing race pace. What's the explanation for that? Is it all about the tyres and tyre management? Maybe the fresh soft tyres are masking the deficits a little bit on Saturdays?

No, not only that. I think as always, in F1 it's not about one thing, it's about a lot of little things. Over one lap you can get your tyres to where you want, and you don't need these tyres after that lap. So you can slide a bit more, you can afford to push harder.

It's still a learning process on what we need to do exactly during the race in terms of management, in terms of optimising the car. And we're getting there, we're having more and more understanding. And I'm sure it's not going to take long until we understand exactly where we lack that race pace. But we know we also need just more performance out of the car in general. And that will also help Saturdays because we're closer to where we want to be, but not exactly where we want to be."


Is the balance changing when the car is carrying more fuel?

No, the balance is actually quite decent. You know, with this car, when we optimise the setup very well it's probably the best-balanced car I've ever had.

"WE DEFINITELY DIDN'T START THE SEASON WHERE WE WANTED. BUT WE'VE DONE A MASSIVE STEP FORWARDS"

Mercedes has abandoned its radical 'zeropod' concept and appears to have enjoyed a competitive uplift – or at least, in the words of Toto Wolff, established a 'new baseline' – but does this mean the team is now 18 months behind key rivals? And has such a big development push come at a cost to next year's car?

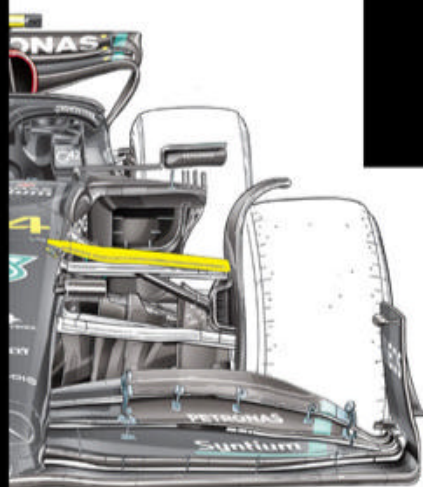
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WORDS JAKE BOXALL-LEGG
PICTURES  AND GIORGIO PIOLA

IT'S ALL ABOUT THAT

N

BASELINE



B

“I’m of the belief that this car is now a solid baseline. There’s no more talk about changing regulations, raising the floor edges, and the bouncing is a non-existent topic. It is from there now we can seek performance and downforce.”

It’s taken long enough. Mercedes boss Toto Wolff has spent the past 18 months enduring the consequences of his team’s single-minded pursuit of a radical, nearly sidepod-less design direction. One of the key questions now is whether the most successful team of the past decade can now make up for that lost time.

At launch, 2022’s W13 seemed like a typical piece of swagger from a team confident in its engineering capabilities; instead, Mercedes spent much of that season tinkering with the car simply to get it to stop porpoising, an issue many rivals had already seen off. By year’s end it seemed Mercedes had tamed the car to an extent – it still ‘bounced’ and was unpredictable under braking – but victories in the sprint and grand prix at Interlagos suggested to many, Mercedes included, that there was runway in the ‘zeropod’ concept once debugged.

Except it didn’t quite work out like that. Before the new season had even begun last March, Mercedes had to face the uncomfortable truth that pursuing the concept had been a mistake, that it was a dead end, and the W14 would be a bust without a total rethink. *GP Racing* summed up the mood music coming out of the team by running an image of the W14 going through a shredder on the cover of the May issue. And how apt that was, for Mercedes had already begun work on wide-reaching changes we’re only now beginning to see.

The flurry of upgrades had been planned long before technical director Mike Elliott and chief technical officer James Allison performed the job swap which put Allison back in charge of front-line development. A new bodywork package and floor was pencilled in for the Emilia Romagna Grand Prix at Imola. The race’s cancellation due to heavy flooding in Northern Italy pushed this introduction back to Monaco; hardly the ideal test bed for such a crucial array of updates, but they were already fully ensconced in the W14’s DNA by then. Mercedes was not about to back out of its dramatic U-turn.

TAKING THE PAIN

In our May cover feature Pat Symonds outlined how easy it is to pursue a particular design direction because individuals have become heavily invested in its success. It’s the engineering equivalent of what logicians call the sunk cost fallacy: doggedly following an unsuccessful course of action because a great deal of time, effort and resources have gone into it, when abandoning


it would be for the greater good. It’s a sign of Mercedes’ strengths that it has recognised this and changed course (albeit a little late).

Teams have converged around what appears to be the best sidepod solution: Red Bull’s downwashing arrangement. Even Ferrari has swallowed its pride (see p38). Mercedes was no different by the time it rocked up on the Côte d’Azur, developing its own concoction with more conventional cooling inlets and a clear downwards ramp on the upper surface. It came

as little surprise Mercedes would choose to follow this philosophy, since it has already conceded that the zeropod’s potential was illusory.

“For us it was just that was where we saw the most opportunity and we went down that route,” explains trackside engineering director Andrew Shovlin. “There were elements of it [the zeropod] that were useful, but you can’t fully understand the benefits of another concept unless you put it on the tunnel and you work on it for months. It was just that sort of acceptance that we’ve had a good go at [the old] concept. It’s good in a sense that we’ve taken that pain [of switching] now.”

While they comprise the most visible part of the design philosophy, the sidepods are merely a



THE SUNK COST FALLACY: DOGGEDLY FOLLOWING AN UNSUCCESSFUL COURSE OF ACTION BECAUSE A GREAT DEAL OF TIME, EFFORT AND RESOURCES HAVE GONE INTO IT, WHEN ABANDONING IT WOULD BE FOR THE GREATER GOOD

conduit for the rest of the aerodynamics to work properly, helping to produce the requisite airflow patterns around the car needed to ensure that every aerodynamic device works as intended. Changing the bodywork doesn't suddenly transform the fortunes of a design on its own, but rather offers a symbolic change of direction that Mercedes feels can bear more easily harvestable fruit. Hence Wolff's claim that the revised W14 offers a "new baseline" to work from.

Of the visible floor changes along the edge, Mercedes had introduced a more pronounced lip and a longer slot in its efforts to build a seal around the floor's edge, fulfilling the job of the skirts featured on the older generation

of ground-effect cars. Where the old sidepods featured a predominant inwash characteristic to enhance the "Coke bottle" section at the rear of the car, the downward direction of the airflow with the new design brings it to the upper surface of the diffuser.

This all integrates with the new front suspension package, where the wishbone positions have been redefined to not only improve the local flow patterns, but also assist with the distribution of loading to improve the stability of the floor. This is an area where Red Bull has excelled within the new regulations, having understood that a car with a minimal amount of dive and roll during the cornering phases ▶

The W14's first upgrades finally saw the light of day in Monaco, were most effective in Spain, and were due be added to at the British GP



ensures that there are no sudden fluctuations in downforce through the high-speed corners.

HOW THE BUDGET CAP AFFECTED THE CHANGE

The current W14 is in essence a B-spec car, even if Mercedes hasn't delineated between the two versions formally, and a remarkable amount of work has gone into making the overhaul possible



Upgrades such as the new suspension layout (below) and rear brake duct winglets (above) all had to be budget cap costed

despite the limitations placed on it by the cost-cap regulations. Pre-cap, outfits with large budgets could afford to throw money at problems with little regard for the overall expenditure. But the current limit of around \$140m per year forces even the wealthiest teams to prioritise which upgrade packages make it through the pipeline.

This also affects the time it takes to make things happen; the fewer resources available, the longer it takes to move a project to completion. Regardless, Mercedes attempted to fast-track them as much as it could, even forgoing some of the more granular analyses to get the designs signed off and parts built.

"The cost cap gives so many constraints," Wolff explained before the upgrades were introduced. "In the past, we wouldn't even know what a front suspension costs; today, we need to take the purchase price of the aluminium and factor in how much the machining of it costs, how much do you need to write off from the aluminium that you don't need, price out every bolt that goes into the suspension, the carbon that you bought as the raw material, then cut it and put it on..."

"What is the energy cost of the composite room, and the overhead that goes into it? This is super complex, and it's gone so far that we have cost analysts and engineers to decide whether buying that kilogram of aluminium is worth the performance gain on the other side.

"That process is so difficult and painful; people that should be creative only and have carte blanche,

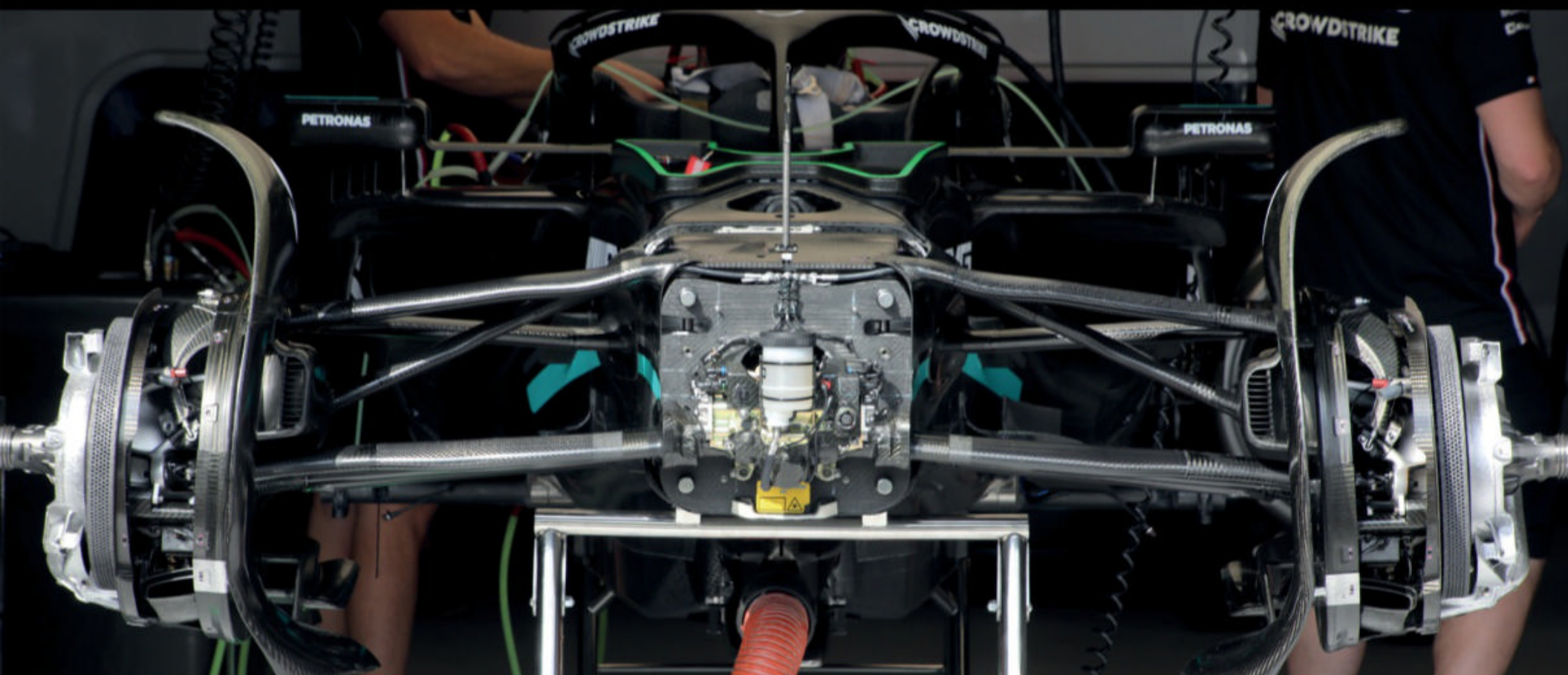
they can't do it because somebody is telling them if it's feasible in the cost cap or not. If we were free, we'd probably bring double the amount of upgrades."

Working with the existing chassis had its own limitations, particularly since the homologated and structural parts couldn't be easily changed. For example, Mercedes had previously housed one of its side-impact structures within an extended mirror mount, and had to retain the impact structure's position and sculpt the new sidepods around it.

The radiators and other internals could, however, be shuffled around to accept the new inlet position, as the wider sidepods created space to optimise their placement. Again, this doesn't simply yield a purely aerodynamic effect, it influences the centre of gravity height. In turn, that affects the suspension loading, so this must also be considered in the new suspension package. No upgrade exists in solitude.


Feedback from both Lewis Hamilton and George Russell has been positive, both echoing Wolff's claim that, although not the finished package by any stretch, it has at least set the


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team on the right path. In particular, both drivers struggled with feedback on corner entry and front-end stability at the apex of the corner, and the signs are that this has been rectified. The car still isn't where the drivers want it, but it at least imbues them with more confidence at the wheel.

MORE PAIN IS COMING

Even if the budget for upgrades were unlimited, the W14 would reach a performance ceiling. When a car is designed to a different series of parameters, new developments in a different direction will require some compromise. In other words, the full effect of Mercedes' findings won't be apparent until 2024's W15 breaks cover.

In that, there's a few key areas where the drivers have been clamouring for improvement, particularly in the realms of low-speed performance and in making the rear end as stable as the front now is. Hamilton sums it up best, feeling that although the team was making progress in that area, the overall characteristics of the W14 were still similar pre- and post-upgrade – something that inherently wasn't going to help the drivers topple Red Bull in the short-term.

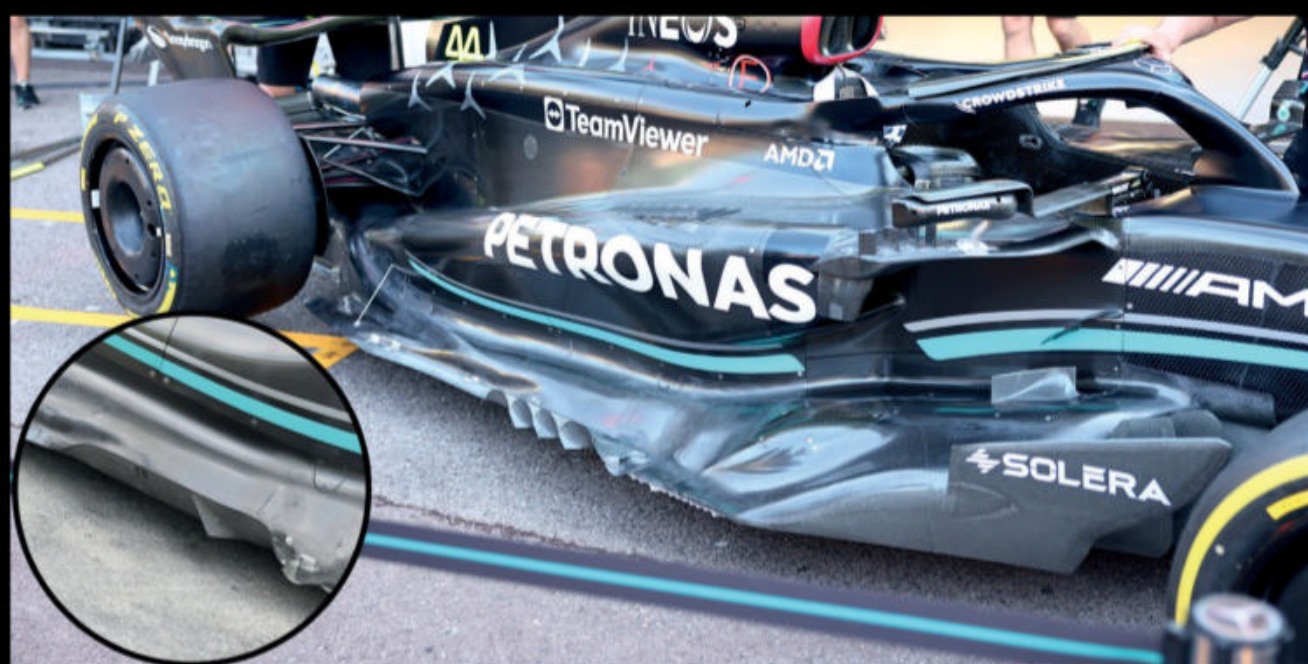
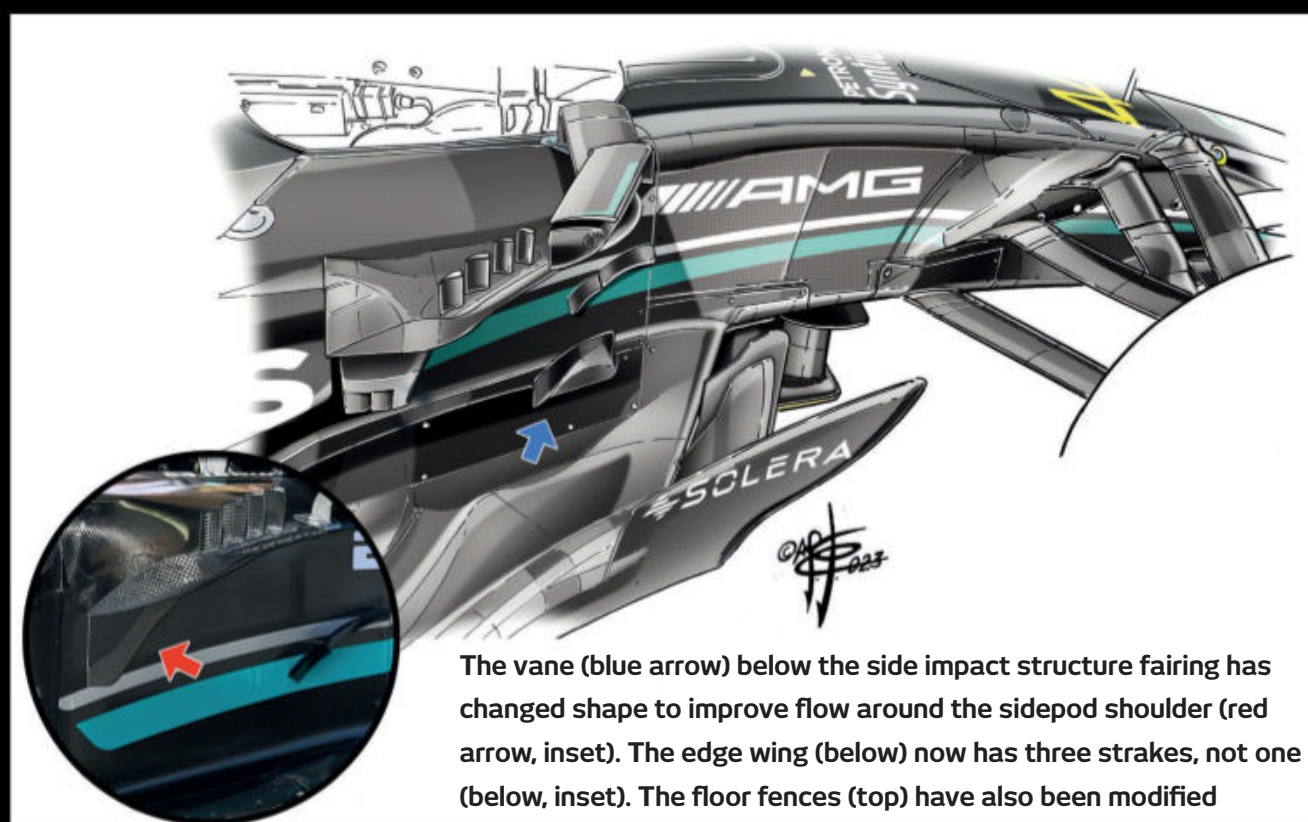
"We've got a lot of work to do just to add rear downforce to the car and a little bit more efficiency. But we're chipping away," he says. "In truth, it doesn't feel a huge difference to the

"FOR THE NEXT YEAR'S CAR, YOU NEED TO TAKE A LOT OF THESE DIFFERENT THINGS OFF AND CHANGE THEM" Lewis Hamilton

beginning of the year. There are some elements of the car which do feel different, but it's just simply having a little bit more downforce on the car. But the characteristics of the car are very, very similar to what we had earlier on in the year.

"For the next year's car, you need to take a lot of these different things off and change them. It's definitely not, characteristic-wise, the car that's going to be able to beat the Red Bull just yet. And so, we've got to work on that."

Hamilton also believes Mercedes needs to "take its eye off the ball" with the current car at some point to start optimising its new-car concept around the knowledge gleaned from the newer specification of the W14. Red Bull has probably already started its switchover to next year's car.



That said, the simulations and development work that continue to influence the W14 are being carried out with a view to 2024, and the data collected over the remainder of the season will also feed into the W15's gestation period.

"Changing concept is a fairly painful process," Shovlin says. "You lose development time just to get back to where you were. We've taken that pain now, and the benefits of what we've done well

are going to come more in the future. In the next weeks and months and carrying into the next car, that's where you would really expect to see that."

Arguably, Mercedes now sits where it should have begun 2022, although it's easy to make that claim with hindsight. Plotting a direction which doesn't take it down another development cul-de-sac is going to be crucial if it is to challenge Red Bull again – and not fall even further behind. **GP**



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Jonathan Eddolls,
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functions of the pitwall
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INTERVIEW OLEG KARPOV

PICTURE RED BULL CONTENT POOL

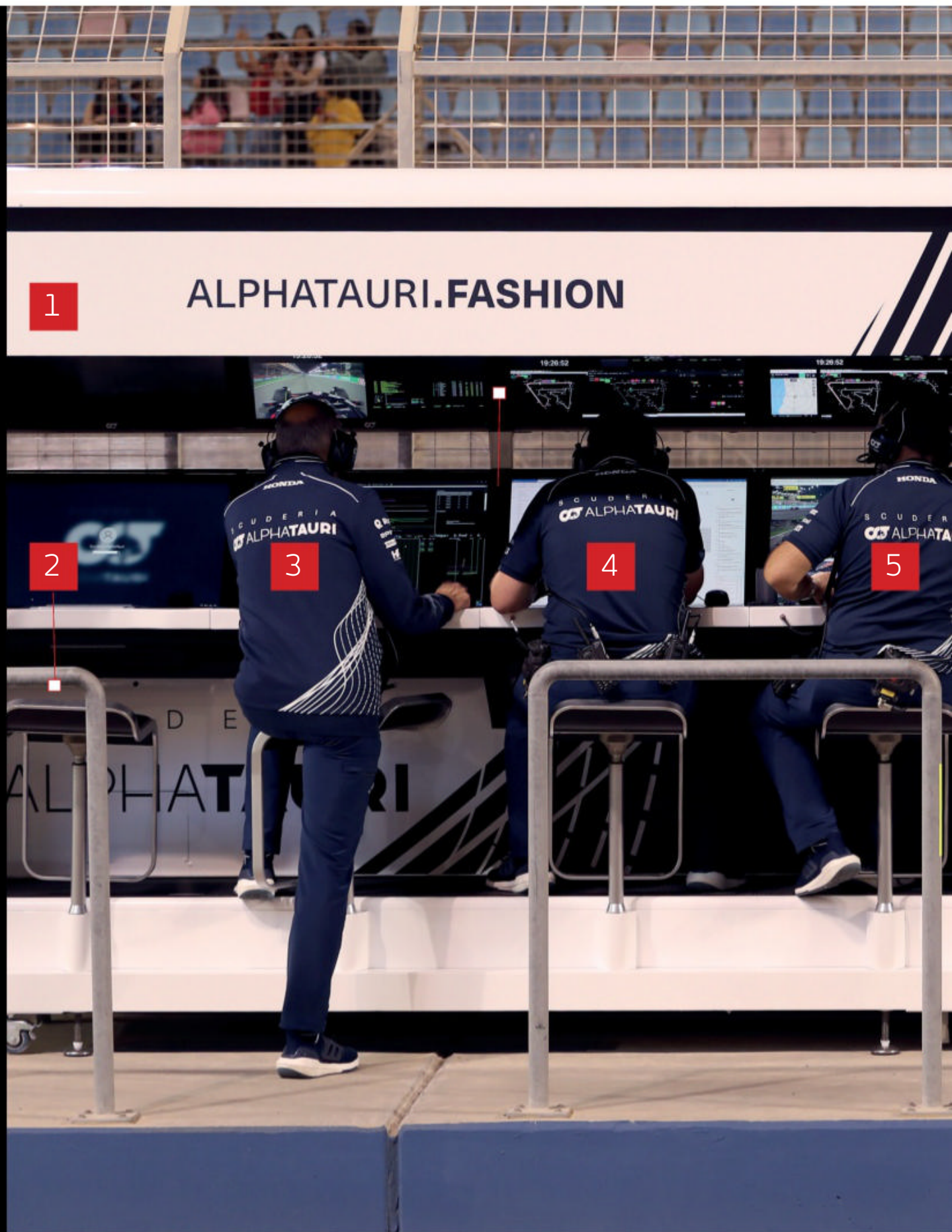
1

"This is what a lot of the teams call 'the prat perch'. It's a sort of slang used by the mechanics to describe the setup on the pitwall – in the sense that this is, basically, where all the prats sit. In my previous team, Williams, it was known the prat perch but here, at AlphaTauri, nobody had heard of that! We just call it the pitwall.

"Ours is unique because it's got eight positions. Most of the teams have much smaller setups, but we think it's important to have the people out there, just to get situational awareness – of the weather, to see what's going on in the garage or in the pitlane, especially in qualifying, trying to find the good gaps to send the cars out."

2

"The position on the left is often vacant. In the past, it was occupied by someone from Honda, for example, and now it's available for a guest if needed. Each position has its own intercom panel and two monitors. The top row is used to show the standard pages, with no technical information that we wouldn't be happy to share, because it's obviously easier to photograph. Up there are things like official timing pages, weather, GPS maps – the sort of things everyone's got. And then on our own screens at the bottom, we personalise it a little bit more, depending on what our roles are and what we want to look at."



3

"The next position is for Franz Tost, our team principal. During a race he tries to be non-operational. He leaves the decision-making to us, and the most likely scenario when he'd be involved is when we want to do a driver swap. These situations are always tricky, and potentially even controversial, so we'll always run it by him, and he's the one to make the final call. But other than that it's just important for him

to see the overall picture. He likes to follow the timing screens, he looks at some data, particularly tyre temperatures and pressures, he listens to all of the important channels: strategy, drivers – so, he's well aware of what's going on. But ultimately he lets us do our own jobs."



4

"It's more or less the same for Jody Egginton, our technical director, who's next to him. He doesn't come to all the races, and we don't want to operate in a different way depending on whether he's there or not. He would be involved if we have to manage some issues on the car, but he's mostly monitoring. He's mainly looking at telemetry, and if he's there, for sure he will assist if there's a need."

5

"Next one, Marco Perrone, head of sporting direction. He knows and understands all of the regulations, he's our link to the FIA, and he's monitoring if drivers have been picked up for any infringements, such as track limits. If there's an incident involving one of our cars, whether we're in the right or wrong, he will be reviewing that very quickly. He's got all the onboards available, CCTV footage. So if we see something, he's the one to

review – even if it doesn't involve our own drivers, if someone's, let's say, done something wrong, we could report it. He calls the pitstops as well. It's our responsibility to decide when, but he's the one doing all the communications with the garage, letting mechanics know where the car is, whether it's a double stack, and so on."

6

"The next one is me. As head of trackside engineering, I am working closely with both cars' crews and the strategists. On my monitors I have the strategy and timing tools open, and data from both cars as well, so I have an overview myself and don't need to ask the guys questions regarding car balance. Particularly in high-pressure situations, communications are absolutely critical and you want to keep those to the minimum. So I'm trying to take in all the information about car balance, strategy, and our computer simulations – and during races, I take the final call on when we stop."

7

"The strategy is defined by Carine Cridelich, sat next to me. She manages the strategy, even though I take the final call – I'm a sort of filter, in case I've seen something that maybe they haven't. Carine is there to make sure we execute our race in the best way possible. She's got people working with her in the operations room in Faenza, as it's a complicated task, there's loads of data, and one person can't manage and process all of it."

8

"The two positions on the far right are for race engineers. You can see Pierre Hamelin there, who was working with Nyck de Vries at the time. This picture is from the pre-season test, so Mattia Spini is missing as we only test with one car."

"There are many different experts who work in the operations room – performance engineers, aero engineers, tyre engineers, and they're all analysing the data coming from the car, feeding it to the race engineer, and he's just trying to do what is best for his car. F1 is all about compromises. Everyone wants to fight for what is best for their area, and they don't always yield the same answer. It's the race engineer's job to take all of that, knowing the driver, track condition, circuit type, and so on, and try to find the right compromise and give the right inputs to the driver."

THE LONG INTERVIEW

WORDS STUART COOLING
PORTRAITS ALISTER THORPE

THIS IS

JAMES VOWLES

Moving from long-time strategy director at Mercedes – a role that latterly included overseeing adjacent racing activities such as Formula E and the young driver programme as well as calling pitstops – to become team principal at Williams was judged by many in the Formula 1 commentariat to be a bit of a leap. But not to the self-proclaimed 'highly competitive' man who made it...





made Mercedes such a phenomenal fighting force... and unafraid to wear the consequences of the calls that went wrong. Little wonder that when Williams and Mercedes co-ordinated their announcements that he was to replace Jost Capito at the head of 'Team Willy', Merc's headline was "Williams, it's James..."

GP Racing: You've said that motorsport is one of your abiding passions, one of the things that keeps you happy – where did it all begin for you?

James Vowles: I think like many – as a child I watched it on TV. I'm highly competitive, I have been all my life. And that's really what appeals to me, the ability to see a whole group of individuals who are focused the way I am, doing everything it takes to be just ahead of their rivals. But at the time I didn't think this would be a professional career – I had no awareness of whether there would be a place for someone like me in it.

I studied mathematics and computer science at university, not because I thought I wanted a career those subjects, but because I was good at them. And fundamentally back then – this was the late 1990s – there was a demand for that within the world. But about eight months into the degree I realised this wasn't somewhere I could spend all of my life. So I applied to all the Formula 1 teams and got rejected by all of them, some more directly than others. But there were two very helpful replies, one of them was Williams, and I put all the letters up on my wall with Blu Tack.

GPR: That's a sign of the times – nobody bothers sending rejection letters anymore...

JV: They don't, do they? But I kept all the letters and because I'm... tenacious might be another word for it, that [working in F1] became the objective. This is where I'll go with my life. The helpful responses were along the lines of "we don't need mathematicians, we need engineers, you have a very varied background, you have languages, you have other things that most of us wouldn't – but you need the engineering disciplines". So I finished off the first degree and did a master's in engineering [at Cranfield], worked at the same time in Formula 3 and at Le Mans to build up a portfolio of teams. One of the projects we had to do at university was to design a car as a small group. We won an award and in the audience were two people from F1 teams. And a job offer came in very shortly after that, which was fantastic – a job that was made for me.

GPR: This was with British American Racing?

JV: Yes, I'd applied for a job as a test engineer and been for interview. I'd done race engineering in F3 and at Le Mans, so it made some sense to step up to that role. But actually, they realised it was unusual to have someone who had race engineering experience, but also software, vehicle dynamics and other elements. So they forged a role that was a link



ou probably knew the voice before you saw the face. Soft-edged but empowered by the weight of authority, and destined to lap the Formula 1 internet for all eternity: "Valtteri, it's James..."

James Vowles joined what was then known as British American Racing in 2001 as an engineer, one of the hundreds of F1 personnel the casual TV viewer might never see. He remained there through

its several incarnations and built up its strategic facility from zero to a highly effective fighting force – but even then he remained relatively low-profile unless you were one of the select group of journalists invited by Mercedes to one of his fascinatingly detailed briefings.

That changed in the Liberty era, when greater deployment of team radio in 'the show' led to a more front-of-house role during a number of memorable exchanges, from apologising to Lewis Hamilton for not taking the opportunity to pit during a Virtual Safety Car in the 2018 Austrian GP to politely but firmly instructing Bottas to let his team-mate past in Sochi later that season. While there were some, including lesser media outlets, who saw this as a functionary being thrown under the bus by team boss Toto Wolff, either to take responsibility for a blunder or to deliver bad news, those who knew, knew: Vowles was instrumental to the big decisions that

In his role at Mercedes Vowles was barely seen until recent years. At Williams he is, along with the drivers, very much the face of the team



between those, just for me, though I didn't know it at the time. It was special because it gave me the ability to work across five or six different departments with no one defined job.

In the early 2000s strategy didn't exist as a proper area of focus. It was more something that on a Saturday night you'd sit with the drivers and go, "Do you want one stop or two? Great, done, finished, let's go for dinner." There was very little science behind it. Given my background in mathematics and computer science I decided I should put some effort to this, do it properly, do some proper data systems. So we wrote models, really me at first and then we built up a team of two – when I left it was a team of nine or 10. But you started seeing real results from doing this in an analytical, data-driven way rather

After applying to work at Williams all those years ago Vowles is now the man charged with making the team competitive again

I APPLIED TO ALL THE FORMULA 1 TEAMS AND GOT REJECTED BY ALL OF THEM, SOME MORE DIRECTLY THAN OTHERS

than heuristics [trial and error] and feel. In the early 2000s the team was a little bit all over the place but going through 2003 then 2004, it started to grow quite significantly. And that was the region where this kicked in a lot more.

Teams were 250 people, maybe up to 400, now they're nearly 1000. So back then you did multiple jobs, which was rewarding but challenging at the same time. By about 2008 my focus became pretty much strategy and I let go of the race

engineering side. Nowadays you look back and go, "that makes complete sense". But in the 2000s it didn't – you had to pay for yourself by doing other jobs at the same time.

GPR: A couple of months ago we ran a feature on the 2003 Brazilian Grand Prix, where Jordan was video-recording the timing screen to develop strategic tools. And the team was then able to use that to overturn the result. So what was the thought process around that time which led you to realise you could dynamically affect the outcome of races by having a better understanding of where cars were on track?

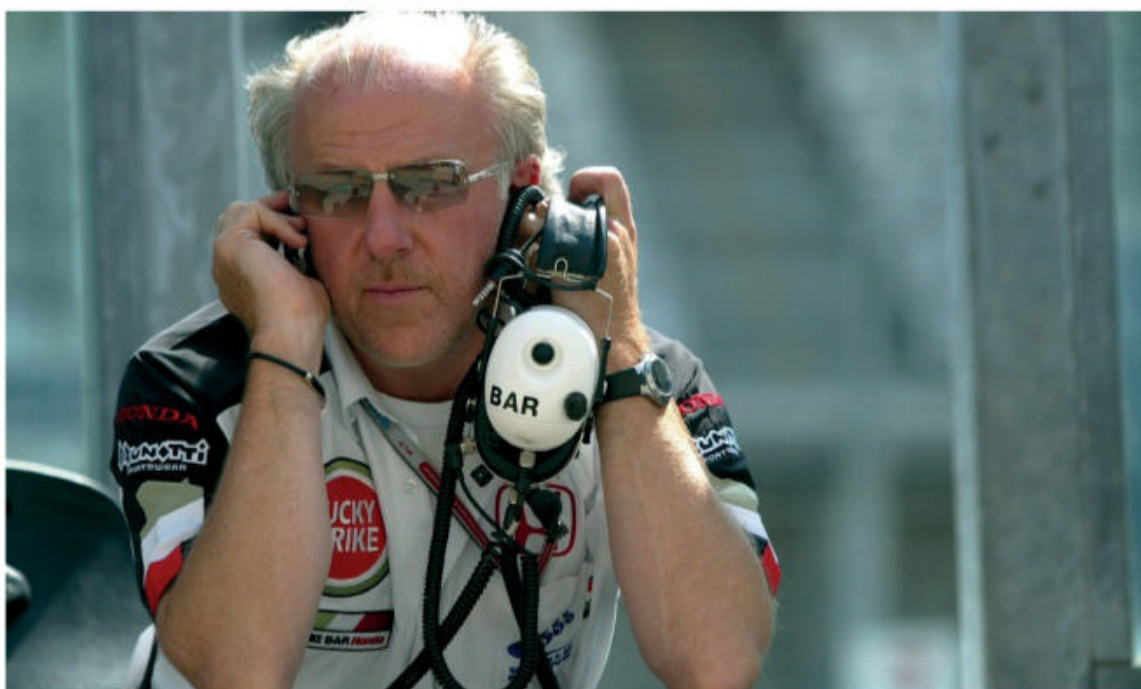
JV: Indeed, back then you had to do some pretty awful techniques. Videoing the recording screen was one of them. Then using OCR [optical character recognition], you'd literally 'scrape' the numbers and letters to build up a timing database because timing didn't come live. Those were really fun years because you were finding methods that allowed you to get as much data as possible on all of your competitors. The first thing was to put it all into data, so the timing was a data stream rather than a video stream and you could then manipulate and do some clever things with it.

Eventually Formula 1 did the right thing, which was to provide us with the live data streams – once they realised all the teams were extrapolating it themselves. Once you have that, you can build a track map of all the cars moving and have an awareness of where they are. Before then, even telemetry was mostly burst, you didn't really know where your car was on the track, apart from the three sector lines and the speed trap lines. When you can start moving 20 dots round a screen, that's potent and powerful compared with what you had before. You can figure out how long it takes to do a pitstop and therefore where you'll drop out into the field. And then you can start calculating the effects of diminishing fuel load and tyre degradation: what your lap time is going to be five or 10 laps from now.

And back then you had refuelling, so you could calculate how long a stint would be as a maximum from how long a ▶



JAMES VOWLES



car spent in the pitlane. You could figure out quite accurately what strategy your rivals were doing, and what the race result would look like barring weather or Safety Cars. That was the journey of strategy in the early 2000s and you got quite good by the end of it. Certainly with refuelling, it was actually a very predictable entity as a strategist, you could really figure out what was going to happen in the race quite early on.

GPR: Was there a gap between your perception of what working for an F1 team would be like, and your experience when you actually got in there? I went to the launch of the 2KQ sportscar in Brackley in early 2000, back when Reynard was making the BAR F1 car but still doing other projects. And I remember Adrian Reynard climbing all over the car and standing on the rear wing to demonstrate the strength of it. Baffling – the sort of thing you expect an American second-hand car salesman to do on their local TV spot. The perception was it got a little bit more serious when David Richards took charge at the end of 2001...

JV: I would completely agree with you. He was a great leader – I learned a lot from him. He took the team in a different direction of travel. Geoff Willis [technical director] came in at the same time from Williams. And it was a huge step up in terms of understanding where we were.

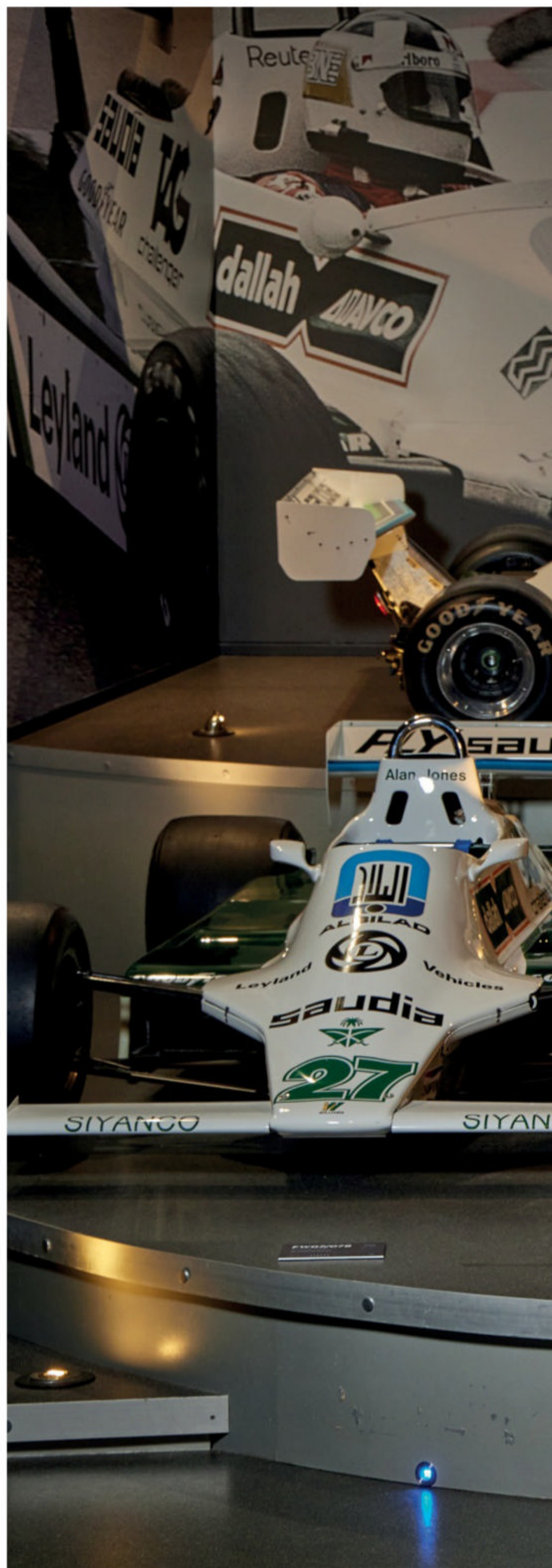
Certainly in the earlier days there was a lot of heuristics and feel. That doesn't exist today. But it did exist 20 years ago because there wasn't enough data – the car itself would only have 16-32 channels of data, now it's tens of thousands.

I certainly remember a number of years where we weren't performant. And it wasn't a data-driven exercise we were going through, it was a heuristic discussion exercise as to what we should be doing. Experiments conducted without data, but rather more based on feel. Now ultimately, I'd probably argue all of those years the car just didn't have enough downforce.

There are other things as well. It was hard, harder than I expected. I worked long hours – there were times I'd fall asleep on the garage floor, because it was three or four in the morning and you were still doing an engine change. In one case we were

David Richards took charge of BAR at the end of 2001 and Vowles admits he learned a lot from him

Much as he'd like Williams to be as successful as it was in the days of Alan Jones and Keke Rosberg, Vowles knows that rebuilding the team will be a long job







testing in Bahrain for about 14 days solid. And that starts to wear you down to a level that's really hard to explain.

GPR: Do you find that there's a difference between perception and reality in F1 strategy? To my mind the armchair experts don't really understand risk, and tend to judge the quality of a strategy based on its outcome rather than on the information available at the time the decisions were made...

JV: I would never come to you and say you don't know what you're talking about. But what I have done with people is to lay out the information that was in front of us when we made a decision: here's why we made it and here's why it didn't work out. Here's also why it could have worked out and what the implication would have been with it. There's a probability attached to everything. No one knows with certainty what is going to happen in the future. You're often making decisions perhaps six laps before people think you're making them – the whole trigger of what performance you do, what [engine] modes you use, your resources, that doesn't happen in the moment – that happens before then [a pitstop].

By the way, there are some that were complete blunders, there's no question about it! In hindsight, you go, "yeah, that was completely wrong". I have no fear about admission of guilt. If you actually lay out the really difficult decisions and probabilistically where they end up, you're playing a chess game against other people – it could be one other, it could be five or six at same time – and what you're doing is trying to

When things go right: Lewis Hamilton praised Vowles and the team for the strategy call that helped him win the 2019 Hungarian GP

force them into a move that is putting them into a checkmate situation. And it's difficult to do that, because they're trying to do the same to you.

But some of the best races I've had as a strategist were some of the Barcelonas or Budapests, where you can just see the whole build-up to what you're doing to that competitor many laps before. And the finale was as our tools predicted. And it's this beautiful finish. But you can see the build-up where you force them – they have no choice but to keep going with a one-stop. And they're finished. They're done. You've created that whole scenario based on where you've been stopping – and the same applies to other races where we've had our hands forced and there's nothing you can do about it.

There are very few races where you're sitting there completely happy. There's normally a tiny hydraulic leak or something going on, you can't do a pitstop because the brakes are hitting 900 degrees and they'll explode if you stop. Suddenly your options get limited. And so they look foolish to the outside world, but there's logic and reason behind what's going on.

But as I said, there's others I've done that I'll have to live with forever. Horrible, horrible decisions.

GPR: There are lots of people who have a very firm set of assumptions about where Williams has been going

IF WE START WITH PEOPLE AND CULTURE, THE FUNDAMENTALS OF IT, CULTURE DOESN'T CHANGE OVERNIGHT

wrong. From your very first appearance in public as team principal you've faced questions based on those assumptions. But presumably, being from a data-driven background, you've approached your first months in the job with an open mind and that's why you've talked about change as being a multi-year process?

JV: I wish it could be done in days or weeks. But if we start with people and culture, the fundamentals of it, culture doesn't change overnight. And it doesn't change just because I say "this is the culture I want". It changes from the bottom up because your organisation buys into the direction of travel you're going

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in. And in organisations this size it's normally three to four years to change – and our culture is just one aspect of things.

By 'culture' I don't mean nasty characteristics. This organisation has been what I would call 'surviving' for many years. And what that means is if you go back to the early 2000s, all you thought about was, "What do we do for next weekend? OK, let's think a bit further ahead. What do we do for two weekends ahead?" That's where this organisation was when I joined, because the finances weren't there, the systems weren't there.

So here's the cultural change: I don't want you thinking about next weekend anymore, I want you thinking about 2025 and 2026. That's a big change from what the organisation has been used to. It's hard because every two weeks you get a slap in the face – because that's what a grand prix is, the way we're performing. And I get carried away with it as well, I want to be better in Canada than I was in Barcelona for instance. But irrespective of that, if we focus on just those small details, we're never going to be making steps forward relative to the field.

So let's now start thinking ahead of that. No one will be reflected or viewed on what our performance is over the next 12 months. We will, however, be making sure we put systems, structures and processes in place. And here's where we're strong. If you're Alpine, you can't redevelop yourself – they're successful, but you can't redevelop yourself to become necessarily top three. We can and that's a strength we have on our side – and I'll create the empowerment to do that. So that's the number one change.

The second is there's a lot of infrastructure missing here, many elements that are still very much from 20-25 years ago, and which need modernisation. Even if we broke ground tomorrow, that's an 18-to-24-month journey to bring ourselves into a situation that's competitive relative to our rivals. If you rush it, if you put a sticking plaster over it, we'll find a small gain. But that's not what I want for this organisation. What I want, and what the investments around us are intended to do, is to bring us back towards the front.

GPR: It's noticeable that you've been very careful to avoid saying there's just one or two things you need to do – hire a

new technical director, redevelop the windtunnel – and then everything is OK.

JV: You've nailed it, there's no individual change that will fix this organisation moving forward. Part of the benefit I've had is that I've lived and breathed in one of the most successful organisations ever in team sports. So I have a vision of what excellence looks like. But everything needs to be brought up at the same time – you're always going to be held back by the elements of the organisation that aren't where we need to be.

We absolutely need a good technical director, and there'll be good news on that within a few months. But that's a part of the journey, not the whole journey. That doesn't



fix things. It's not one individual, it's everything being brought up at the same time.

GPR: This was a family business. It's not anymore, it's a franchise. So you're also having to expand in other areas as well, such as Esports. How long-term are the owners thinking? Something like 10 years and another 800 races before they think of moving on the franchise?

JV: Longer than that, it's part of the discussions we've had all the way through this process. The direction of travel is very straightforward and simple. If they wanted to make money out of it, they would have sold in the past few months because, relative to the buying point, this is a great point to be selling. That's not their interest. We have a fantastic British legacy team which has the opportunity to get back towards the front. The investment is very much long-term. It's part of the reason I joined because that's my vision as well. I'm not interested in something that becomes good in two or three years and gets rotated because it's sixth. I'm here because we have a unique opportunity from the ground up to develop an organisation to be frontrunning. 

WE HAVE A FANTASTIC BRITISH LEGACY TEAM WHICH HAS THE OPPORTUNITY TO GET BACK TOWARDS THE FRONT. IT'S PART OF THE REASON I JOINED BECAUSE THAT'S MY VISION AS WELL

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ALEXANDER THE GREAT

From hanging on to an F1 seat by his proverbial fingertips **Alex Albon** has established himself as a star in the making. So now, like the team itself, life isn't just a case of surviving from race to race – Williams is a team being rebuilt around him as the driver to lead it to future glories

WORDS OLEG KARPOV PICTURES  **motorsport**
IMAGES AND WILLIAMS



ON THE TUESDAY FOLLOWING

the Canadian Grand Prix, Alex Albon received a call from his new boss. James Vowles dialled his driver's number to let him know his Sunday effort was "a drive of champions".

It was easy to see why Albon's faultless drive, holding back four of his rivals in seemingly faster cars to bring home six points for seventh place, impressed. But that kind of praise, from someone who over the past 20 years had worked with Jenson Button, Michael Schumacher, Nico Rosberg and Lewis Hamilton, isn't something you hear after a race that is merely quite good.

"It's always nice to receive positive feedback," Alex smiles when *GP Racing* asks about that call. "We're also interested to hear the negative feedback too, but it's always good to hear the positive side. We talk about a lot of things, but it was nice to chat just about the Sunday."

That seventh place was special for a whole number of reasons. Not only was it Alex's best result so far as part of Williams, but it came after weeks of intense work at the team's Grove factory. Owing to a lack of spares after the Barcelona round, Williams had to rush the upgrade package to be ready for Montréal, one of the tracks in the calendar that particularly suits the FW45. New bits, fresh from the autoclave – a one-of-a-kind set – meant a decision had to be made. And, after the year and a half Albon has

had at the team, it wasn't one to agonise over – obviously, Alex would be the one tasked with validating and racing the upgrade.

A street track, one of the few weekends in the first half of the season promising a real chance to score points, an upgraded car, a lack of spares – and changeable conditions on top of all that...

"Yeah, it felt like there was a little bit of expectation and pressure, in some respects, to deliver because we put so much into it," says Alex. "You know, James brought everyone together [at the factory] and explained the situation, that we need to work really hard to get this car ready. I was there in that chat – in some ways, I guess, trying to morale-boost everyone. I mean, the guys did an amazing job. I think our floor arrived on the plane – very, very late.

"People worked through the weekends for it. Obviously, you know, they have families, they had to sacrifice quite a lot for it. And it's not an easy track to bring an upgrade to because... it's got walls, it's very bumpy. And the weather was not great. And we were putting slicks on in the rain and all these kinds of things."

But it worked out pretty well. It seemed as if throughout the weekend Williams threw one challenge at Alex after another, and he met every one of them. The pressure of having the singular version of the updated car didn't dissuade the team from giving Albon slicks and sending him

out on a damp track in Q2 – and he topped that segment of qualifying. And even though his final starting position was ninth, in the race the team gave him another big task, opting for an ambitious one-stop strategy. It was the only one capable of delivering a good haul of points but, with that, it would demand Alex mount a twenty-lap defence from cars on much fresher tyres.

It's mainly those twenty laps, throughout which Albon denied George Russell and then Esteban Ocon, that made James Vowles feel like he would have to give his driver a call a couple of days afterwards.

"To get the points and get the results," smiles Alex, "there was a lot of happiness, a lot of passion in that. But also, just great to be able to turn what was a difficult situation into a great result and to repay everyone at the factory for that hard work. It's always a dream scenario to be able to do that. And next Saturday we had a summer day for our team. So all the families, everyone came out, and even then it was like... a fairytale. A perfect story."

The 2023 version of Alex Albon is a textbook example of a Formula 1 team leader. Experienced, fast, hardly makes any mistakes and maximises every opportunity to score. His season and a half at Williams has transformed perceptions of him – to the point where, in the paddock, Alex is now cited as the ideal team-

Seventh for Albon in Canada was a great result for the team as well, since the FW45 upgrades had been fast-tracked for the race





Despite dropping to 10th at the start in Canada (above) Albon turned the ambitious one-stop strategy into gold, which impressed Vowles (below)



“To get the points and get the results, there was a lot of happiness, a lot of passion in that. But also, just great to be able to turn what was a difficult situation into a great result and to repay everyone at the factory for that hard work”

mate to Russell should Lewis Hamilton decide to walk away from Mercedes after all. Over at Red Bull Albon’s former boss Helmut Marko has openly lamented the fact that he can’t get him back until the start of 2025 at the earliest.

“I think last year was much more about having to prove myself,” says Albon. “I would say my stock was quite low, and it was trying to... Well, truthfully, the first goal is the obvious goal, it’s to stay in F1. Once you get there again, you want to glue your feet to the ground.”

He’s done it. Four years after his debut – a period that included a season and a half at Red Bull Racing and a year on the sidelines – he can finally say he’s entrenched in F1. His performance last year was so convincing that Williams acted fast to remove him from the market just as that silly season became really silly. For the first time in his career, he has a multi-year deal.

“Until last year, I was always driving on a one-year contract,” he says. “That’s even from karting days. You never knew what next year was going to be like, there was never stability in my career.

“You spend your whole life in motorsport with this grey bubble around your head – at least I did, with a lack of funding and sponsors and whatever, no junior team for a good period of my career.

“You kind of get used to it, to some extent. It’s exactly the reason why it’s [the Netflix show]

called *Drive to Survive!* But you’re so used to it, that it’s not such a big thing. And yet, once you do get that stability, it does feel good.

“I’ve said it before, but there’s no secret that last year, one of my main focuses, goals for the year was to make sure I stayed in F1. Sounds silly, but it’s the reality of it. To have that security is great, in such an unpredictable sport. So, yeah, I do enjoy it.”

The goals are different now. His performance relative to Nicholas Latifi – in qualifying and in races – was even more impressive than Russell’s before that. And this year, while Logan Sargeant is learning the ins and outs of F1, Alex has been taking Williams upwards in the constructors’ standings by himself. Three weeks after Canada, Albon finished eighth at Silverstone, pushing his team ahead of Haas and Alfa Romeo.

So Vowles’ words that Albon is who he wants to build his team around shouldn’t come as much of a surprise.

“I’d say the biggest thing is the language and the kind of meetings we have,” says Albon of his changed approach. “For example, straight away, really early in this year, we’re already focusing on next year’s car. What does this year’s car do that we don’t want in next year’s car? We need to attack those areas early in the year, so we can make sure by the time the car comes it’s there,


hopefully ironed out a little bit.

“And when you’re racing everything’s really in the present. What’s the next race? What do I need to do for the next race? All the focus is on that next race. You don’t have the mental space or the capacity to think about the future because it’s not in your interest. There is no reason to think about it. So that’s... that’s really the difference.

“When we did our contract, it wasn’t just a short-term, kind of a quick thing, it was really about, what are we going to achieve in the future as a team? And I include myself a lot in that. So we know there’s a long road ahead of us, and it’s not gonna happen overnight, or in one year. So my job is, especially this year, a lot of the stuff I talk about in the debriefs, focusing over the weekend, is actually more about the next year’s car. We’re already doing a lot of simulator work for next year’s car and making sure we’re focusing on these areas.”

And that is what Vowles wants from his driver.

“I mean, he’s a new guy in the team,” laughs Alex when asked about his relationship with his boss. “So, as the races have gone on, we’ve obviously got to know each other more and more, and I think we’re forming a strong relationship and have similar goals and areas that we think need to be improved and whatnot.

“Yeah, it’s a good place to be at.” 





THE GOOD



THE BAD

Over 800 world championship races and 114 victories the team which started life as Williams Grand Prix Engineering has notched up nine constructors' championships. It's a story of some incredible cars – and a few which fell short of greatness...



AND THE UGLY

WORDS MAURICE HAMILTON
PICTURES  motorsport
IMAGES

THE GOOD

FW07

The car that made the Williams name. It could hardly have been otherwise when an underbody tweak suddenly had the FW07 lapping Silverstone more than 1.5 seconds faster than anyone else – and on its way to the team's maiden win with Clay Regazzoni in the 1979 British Grand Prix. Ground effect might have been pioneered by Lotus in 1977 but Patrick Head advanced the principle even further. The Williams technical director produced the neat and light FW07 for 1979 but teething problems affected the first few races. The car's potential was suddenly released when, along with aerodynamicist Frank Dernie, Head tidied up the airflow around the base of the Ford-Cosworth V8. It was something they had been meaning to do for a while – but never quite got round to it. The performance improvement would be massively disproportionate to the simplicity of sealing a low-pressure area with metal panels. Four more wins would follow – too late to secure the 1979 championship – but the modified FW07B was on its way to giving Alan Jones the title the following year with five victories for the Australian, and a win for Carlos Reutemann in Belgium contributing to the first constructors' championship for Williams.



FW11

The Williams-Honda FW11 might have been a superb car but 1986 was fraught with drama, worry and, ultimately, a failure to win the drivers' championship despite nine wins between Nigel Mansell and Nelson Piquet in 16 races. By allowing the drivers to fight among themselves, Williams saw the drivers' title slip through its fingers even though the constructors' championship had been won by a comfortable margin. A season of huge promise had got off to a shocking start in March when Frank Williams almost lost his life in a road accident. The racing ended eight months later with Honda disgruntled because its 1.5-litre turbo had been the class of the field, the V6 developing more than 1,300bhp. The combination of impressive power and an associated healthy use of downforce caught the team out during the final race in Adelaide when a massive rear tyre failure lost Mansell the championship and led to a precautionary (and costly) pitstop for Piquet. In 1987, the modified FW11B (running to a regulatory lower boost level) scored on excellent fuel consumption thanks to running less drag. Amid continuing animosity between the drivers, Mansell took a brilliant win at Silverstone but greater consistency meant Piquet went on to the title despite winning fewer races (three to Mansell's six).





FW14B

The game-changing car that drove the development war of the early 1990s. In its on-going quest for technical advantage Williams had tried active suspension on the FW11B and FW12 in 1987 and '88. It wasn't considered race-ready until 1992, when it became an integral part of the FW14B. The team had already mastered its electronically controlled and hydraulically activated gearbox on the FW14, which, significantly, was a joint operation between Patrick Head and his new chief aerodynamicist and designer, Adrian Newey. With everything working as it should, active suspension controlled the ride height, allowing optimisation of the aerodynamics and the production of more downforce. This was before power steering – and Mansell proved better than Riccardo Patrese at not only dealing with the high steering loads but also the unnerving ability of the FW14B to move around on corner entry before settling down and delivering massive grip. Mansell's incredible self-belief and upper body strength allowed him to keep his right foot buried and produce exceptional lap times with the Renault V10 on full noise. He won the first five races of 1992 and wrapped up the championship by Hungary in August, going on to score nine wins in total. ▶





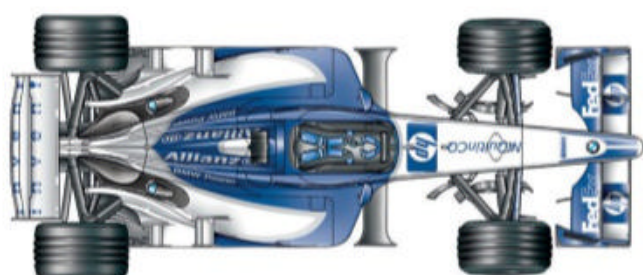
FW18

In statistical terms the Renault-powered FW18 was exceptional, winning 12 of the 16 races in 1996. From a driver's point of view it was a dream machine, particularly for Damon Hill who, finally, had a cockpit to fit his lanky body and large feet. Adrian Newey also gave Hill a car that was perfectly balanced and imbued confidence. It incorporated lessons from the FW17; a good car but made better by Newey maximising a loophole in the regulations thanks to a step-up gear in the transverse gearbox helping give a huge increase in downforce. Hill showed strength of character by bouncing back from a dismal 1995 when he turned a losing psychology (exacerbated by the team's poor operational decisions) into a winning one. Hill's biggest rival would be his new team-mate and F1 debutant, Jacques Villeneuve. The 1995 Indy winner claimed pole for his first race and almost won it but for a leaking oil pipe. Villeneuve would close Hill's championship lead to nine points going into the final round in Japan, but nothing was going to stop the Englishman in what he described as "the most delightful car to drive".



FW25

Juan Pablo Montoya described the Williams-BMW FW25 as "the best-driving car I ever had". Quick it might have been, but the FW25 represented an opportunity lost in 2003. Williams was into its fourth season with BMW, a relationship that never truly gelled. By 2003, Patrick Head felt Williams had got its act together and was able to make the most of the BMW V10, based on a design laid down by the nascent genius of Andy Cowell (later to spearhead the all-conquering Mercedes power units) and developing close to 900bhp at 19,000rpm. Williams was eight points ahead of Ferrari in the constructors' race, with Montoya one point behind Michael Schumacher, going into the final three races. Williams was then distracted by what Head described as "Ferrari throwing in a curved ball" by challenging the width of the front Michelins (used by Williams and others; Ferrari was on Bridgestones). The subsequent testing and checking added to a sense of frustration caused by Montoya leading and then retiring with hydraulics failure at the final race in Japan.



THE BAD



FW12

After dominating the previous two seasons 1988 turned out to be a disaster, thanks to Honda pulling the plug and leaving Williams in the non-turbo lurch. The FW12 wasn't a truly terrible chassis; it was the on-board equipment that compromised performance. A win for Nelson Piquet with active ride on the FW11B at Monza in 1987 prompted the trick suspension system to be fitted to the FW12 in the hope of compensating for the loss of power. It would be a major handicap. The on-board computer not only added weight but also drew power from a Judd V8 that was already short of breath compared with the turbos. Losing 15mph on the straights was one thing; having inconsistent hydraulics make cornering scary and unpredictable, quite another. Seven consecutive DNFs for Nigel Mansell (and a sole point for Riccardo Patrese at Monaco) prompted desperate measures on the eve of the British GP. In what Patrick Head described as a necessary "bodge job", the FW12 was converted to passive suspension overnight, Mansell repaying the beleaguered team with a typically gritty second place in the wet on race day. That was as good as it would ever get for the Williams FW12. ▶

THE GOOD, THE BAD AND THE UGLY

FW06 | 1978 | GOOD

Simple, easily maintained.
Got WGPE up and running

FW08 | 1982 | GOOD

Tough little championship
car for tough little driver

FW10 | 1985 | GOOD

First carbon-fibre Williams
for Mansell's first win

FW13B | 1989 | GOOD

Took a while to parlez
with Renault

FW15C | 1993 | GOOD

Couldn't go wrong with FW14B
heritage and Prost driving

FW16 | 1994 | BAD

Mixed memories; loss of
Senna; Hill's feisty response

FW17 | 1995 | GOOD

Squandered, to Head's
disgust, by Hill and Coulthard

FW19 | 1997 | GOOD

First for Villeneuve. Last
for Newey and Renault

FW20 | 1998 | UGLY

Awful colour scheme
matched average car

FW21 | 1999 | UGLY

More un-Williams-like
livery and results

FW22 | 2000 | GOOD

Hello BMW and Button

FW23 | 2001 | GOOD

Opportunity lost through
unreliability and driver error

FW24 | 2002 | GOOD

Constructors' P2 – but Ferrari
better; much better

FW27 | 2005 | BAD

Couple of podiums but no
chance of win. P5 constructors'



FW35

The FW35 runs neck-and-neck with the FW33 for the dubious honour of scraping a couple of points each season to finish at, or embarrassingly close, to the bottom of the championship. The FW35, designed by Mike Coughlan, Ed Wood and Jason Somerville, perhaps edged it straight away when Pastor Maldonado (qualified 17th for the first race of 2013 in Australia; spun off after 24 laps) described the Renault-powered car as "undrivable". The Venezuelan's disappointment came after winning the previous year's Spanish Grand Prix with the FW34, a car he loved. The FW35 was closely based on the previous design, and all might have been well but for the incorporation of another version of the Coandă exhaust system that hadn't worked on FW34 – and was promptly declared illegal in Melbourne. Williams would never recover from such a bad start to the season and became further destabilised in July when Coughlan was replaced by Pat Symonds. The experienced engineer gradually brought some order to a team struggling regularly to get out of Q1. There was an exception in Canada when Valtteri Bottas made the most of slippery conditions to qualify a superb third – only to sink like a stone to 14th, one lap behind.



FW42

A disastrous 2019 was summed up in Baku when, though no fault of his own, the bottom of George Russell's FW42 was smashed by a manhole cover sucked from its frame. The unexpected call for a replacement floor was the last thing an already over-stretched production department needed just four races into the season. Williams had been on the back foot from the moment chief technical officer Paddy Lowe left under acrimonious circumstances, when the Mercedes-powered car wasn't completed in time for winter testing. Doug McKiernan, the chief engineer and former head of aero, initiated a programme of aero change that allowed Russell and Robert Kubica to favourably report on FW42's balance – if not a serious absence of downforce. The parts shortage continued until at least mid-season, forcing the drivers to avoid kerb-hopping during practice and qualifying for fear of damaging parts that couldn't be replaced for the race. Such a handicap called upon the Williams tradition of mechanics performing miracles by fixing and rebuilding in record time. But it was never enough to help add to the forlorn point scored at Hockenheim when Kubica, never far from the back, happened to find himself in 10th place. ▶



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FW28 | 2006 | BAD

8th in championship; lowest since first season in '78

FW29 | 2007 | GOOD

Improved; but not enough to win – or even come close

FW30 | 2008 | GOOD

Rosberg P2 outlier in Singapore – just like 'Crashgate' race

FW31 | 2009 | GOOD

Zero points for Nakajima did nothing for P7 constructors'

FW32 | 2010 | GOOD

Don't mention Sir (delete) Fred Goodwin and RBS money

FW33 | 2011 | BAD

Five points total worst ever. P Head quietly retires.

FW34 | 2012 | GOOD

Maldonado's Spanish win a welcome mystery

FW36 | 2014 | GOOD

Brilliant comeback with Mercedes power to P3

FW37 | 2015 | GOOD

Quality P3 despite nothing like Merc and Ferrari budget

FW38 | 2016 | GOOD

Fast, but lack of money/ upgrades causes late drop to P5

FW40 | 2017 | GOOD

Bypassing '39' for 40th anniversary brings no luck

FW41 | 2018 | BAD

P10: start of a slippery, financially strapped slope

FW43 | 2020 | BAD

Sold to Dorilton Capital with zero points on the board

FW43B | 2021 | GOOD

Passing of Sir Frank. Pandemic-enforced revisions

FW44 | 2022 | BAD

Slipped from 8th, ready to rebound from the bottom

THE UGLY

FW09

Meant to be practical rather than pretty. The FW09 was used for the necessary switch from normally aspirated Ford-Cosworth engines – which had been Frank's perennial favourite – to turbo power. Having done a deal with Honda in February 1983, Williams put together FW09 in time to make its debut in the final race of the season in South Africa. When Keke Rosberg finished a surprising fifth at Kyalami, it proved to be a false dawn. Running at altitude on a reasonably quick track would be nothing like what was to come in 1984 as Rosberg and Jacques Laffite retired repeatedly as turbo hoses were blown off, piston pieces sprayed from the exhausts and the car regularly caught alight. In the midst of this mechanical mayhem, however, Rosberg scored a remarkable win by more or less being the last man standing on a crumbling racetrack in the searing July heat of Dallas, the doughty Finn staying away from the walls thanks to literally keeping a cool head with the aid of a refrigerated skull cap. The bull-nosed machine had more than served its purpose as a test bed for great success to come.



FW26

Forever remembered as the 'Walrus Tusk', the FW26 was troublesome from the start in areas other than the unusual feature at the front. At a time when the regulations seemed to be discouraging innovation, chief aerodynamicist Antonia Terzi and head of design, Gavin Fisher, came up with a short, broad nose sporting two pillars descending to hold the front wing; an arrangement Patrick Head would much later refer to as "the rather stupid tusk car we produced in 2004". To be fair, Head was the first to recognise that the time had come to hand over the reins: Sam Michael became technical director after seven races. The Australian had a lot on his plate as he addressed several wrong decisions taken throughout the design process, ranging from aero to gearbox. Added to which, the BMW V10 was no longer the powerhouse it had been, and Juan Pablo Montoya and Ralf Schumacher both knew they would be leaving at the end of the season. Williams might not have been a fully coordinated team working with a frontline product – but it wasn't for want of trying. By August the walrus tusks had gone and Montoya signed off two months later with a brilliant win in Brazil. 🏆



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ALESSANDRO
ALUNNI BRAVI

10 THINGS I LOVE



Alfa Romeo's managing director and team representative is a fan of art, architecture and old racing cars...



Art

My dream, when I retire, is to go back to university and study art. My passion is Caravaggio, the Italian Renaissance and Baroque artist. I admire his paintings, especially those from his time in Sicily. If you're in Rome, go to San Luigi dei Francesi. It's a little church near Piazza Navona, which might not be on the standard list of tourist destinations, but there you can see the Trittico di San Matteo, the three paintings by Caravaggio, which are amazing. And if you go to Syracuse in Sicily, you should stop by Santa Lucia, a little church decorated with his paintings. For me, art is something that helps us to evolve as human beings, to develop our personality. It's not just a matter of culture, it's a matter of well-being.

Sicily

Sicily is my second home. I go there in the summer, to a small village in the south, far from the glamorous destinations. I love Sicily because for me it's the best picture of Italy. It is a mix of



decadence, heritage and beauty. We Italians are not perfect, we always have that mix – and Sicily represents that very well. When I go there, when I see these enchanting landscapes, when I feel the warmth, I really feel at home.

Historic racing cars

I'm a big fan of historic cars, especially racing cars and I have two loves. The first is the famous Group C cars from the late 1970s to mid-'80s – because that's when I was a kid, a teenager. I remember my first international race was the 1000 kilometres of Mugello in 1985 – I still have a book with all the autographs. Stefan Bellof, who was my idol, Derek Bell, Bob Wollek, Jacky Ickx, Klaus Ludwig, and of course the Italians – Alessandro Nannini and Riccardo Patrese, who drove for the Lancia Martini team. And my second love is F1, the period from 1987 to the mid-'90s. Simply because I was born in Passignano sul Trasimeno, a village in central Italy where the Coloni F1 team was based. For me, F1 at that time was Coloni. So all the cars from the period when it competed in F1 are still the cars of my dreams.



PICTURES: ALFA ROMEO; SHUTTERSTOCK



Playing tennis

I only started playing three years ago, close to 50. It's a technical sport, very difficult, but I enjoy it because it requires precision and concentration.

Basketball

My son plays basketball, just like I did when I was a teenager. So it's a passion we share and when I have time at home with him we watch NBA games together. We both have our favourite players. Mine is Giannis Antetokounmpo and his are Ja Morant and Jimmy Butler. A couple of years ago – in between races in Mexico and Austin – I went to see the Chicago Bulls play the Brooklyn Nets at the Barclays Centre in New York and it was an amazing experience. Of course, I'd love to find time to bring my son to the US one day to watch an NBA game together.



Philosophy

I graduated from a Liceo classico in Italy, where you get to study literature and philosophy, and where ancient Greek and Latin are part of the curriculum. Philosophy is something I've always loved, especially Friedrich Nietzsche. I have his *The Birth of Tragedy* by my bed, which seems strange because it's very different from some of my views. But I like that kind of literature.

Architecture

Architecture is one of my passions, as is interior design. I love going to the Salone del Mobile in Milan, which is an international interior design exhibition, and I hope to have the time to design my own house one day.



Meeting old friends

My closest friends are still those from when I was 16-18. We're still together. When I have time, I go back to Umbria, for Christmas or Easter, and we always have dinner together – and I'm the one in the kitchen, cooking pasta. This friendship is very important to me. Because in F1 we live in a kind of parallel world, where performance is our priority, where we try to find the last tenth of a second. But normal life is different – and it's important to keep your feet on the ground, to come back to reality. My family and friends help me to do that. And I'm privileged to have friends who were with me at school, so they know me for who I am, not for my position in F1.



Fashion

I'm Italian. So I love fashion. It's not about brands or luxury, I don't like to show off. But I like everything that's made to measure, I like attention to detail, I like the right balance. I think style is a kind

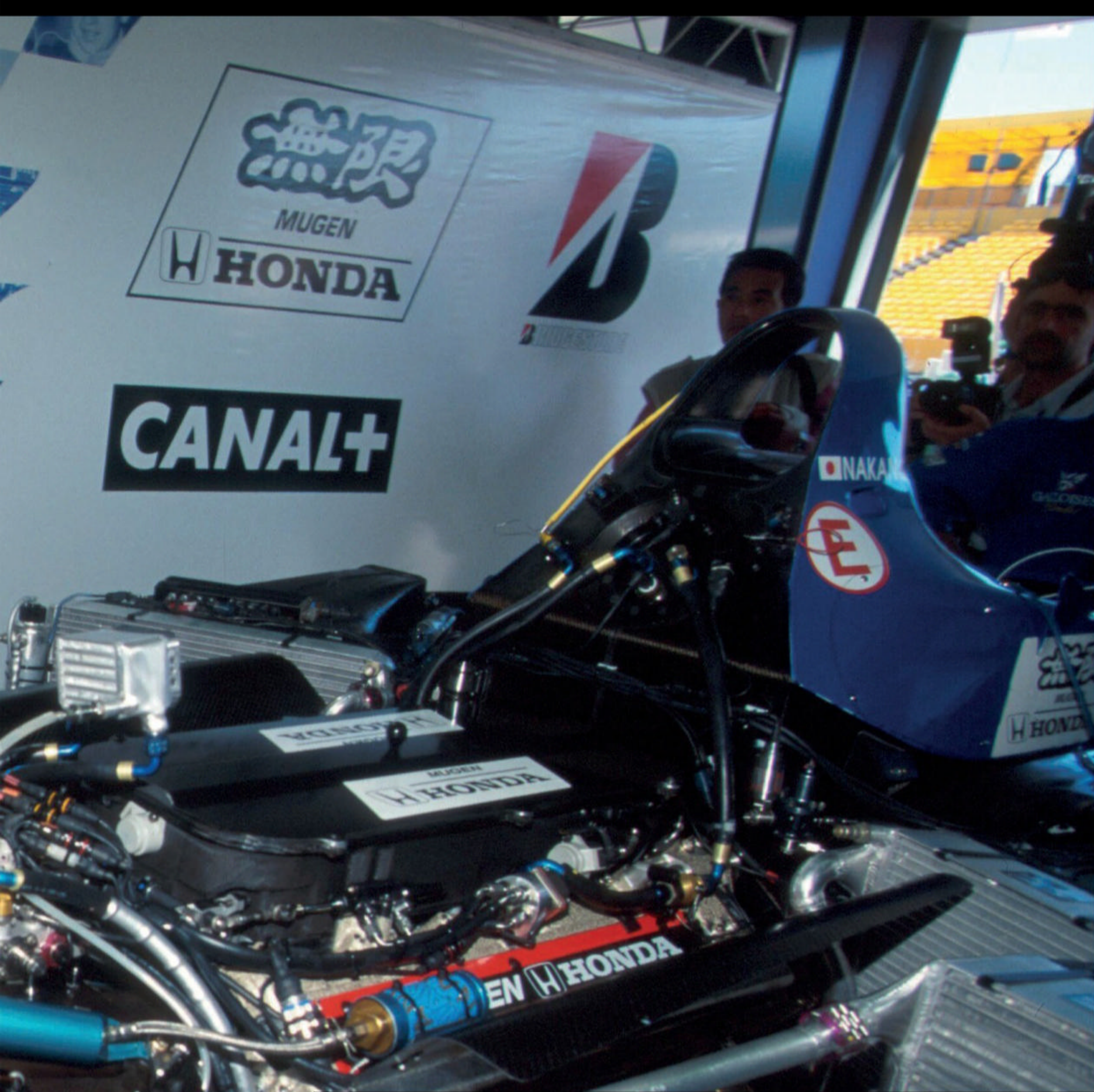


of business card for any of us. The way we present ourselves is not only what we say, but also how we approach people and how we dress. I'm not a fashion addict. But I like to have that little touch, that little detail that shows my personality.

Changing people's minds

This is probably the most important one: I love changing people's opinions. Sometimes we hold on to stereotypes and clichés which aren't always true. I like to change people's views, to challenge them. And I'm also the first one to want to learn from the other person, the first one who wants his opinion to be challenged. Everyone has a lot to give if we're willing to listen and learn.





 **motorsport**
IMAGES

SHOWCASE

ALAIN PROST

It's 30 years since the Frenchman claimed his fourth and final world title...

▲ Most F1 fans will remember Prost as 'the Professor' for his academic approach to racing. His venture into team ownership proved less methodical, although hopes were still high when he bought Ligier in 1997. The team folded in 2002



The shoulder-shrugging Ayrton Senna and Prost discuss matters ahead of the restarted 1989 San Marino GP, where it is said the feud between them started. It's believed Senna reneged on an agreement the McLaren team-mates had made not to overtake one another after the first corner of the race



Alain knew he had to win the 1986 Australian GP to claim a second world title. Nigel Mansell was cruising in third – enough for the championship – when his tyre exploded and Williams called in Nelson Piquet for a precautionary tyre change. Prost duly won by 4.5s and the title was his



Prost and Gilles Villeneuve chill after qualifying for the 1980 South African GP. Villeneuve would line up a disappointing 10th for the race but Prost would be forced to sit it out having broken his wrist in a suspension-related crash. Prost would also miss the next race before returning at the Belgian GP



Days after this seemingly relaxed shot of Prost at the 1983 South African GP the Frenchman was sacked by Renault after falling out with the team management. Eight years later, the same would happen to him at Ferrari



Prost returned to McLaren after his dismissal from Renault. He missed out on the 1984 title to team-mate Niki Lauda by half a point, but became France's first F1 world champion in 1985 after winning five of the 16 races



By 1987 Prost had won two world titles. A third would prove impossible against the dominant Williams pair of Nigel Mansell and Nelson Piquet but Prost still won three races. The third was the Portuguese GP, his 28th F1 victory, and it meant Prost had surpassed Jackie Stewart's record of 27 F1 wins which had stood since 1973



One race after returning to action following his broken wrist Prost was involved in the huge first corner shunt at the 1980 Monaco GP. The Candy-sponsored Tyrrells (centre of picture) collided and Prost was caught up in it. His damaged McLaren is here being pushed away by the marshals





1986's powerful engines meant fuel consumption was a concern with a number of drivers running out in races. In the German GP Prost, running third at the time, spluttered to a stop 500m from the line. He got out to push and although he never made it to the chequered flag he was subsequently classified sixth



After making his debut in 1980 with McLaren, Prost switched to Renault for 1981, the lure of turbo engines too strong. Reliability was still an issue and Prost only finished one of the first seven races. The eighth, though, his home race at Dijon, was where he claimed the first of his 51 F1 race wins





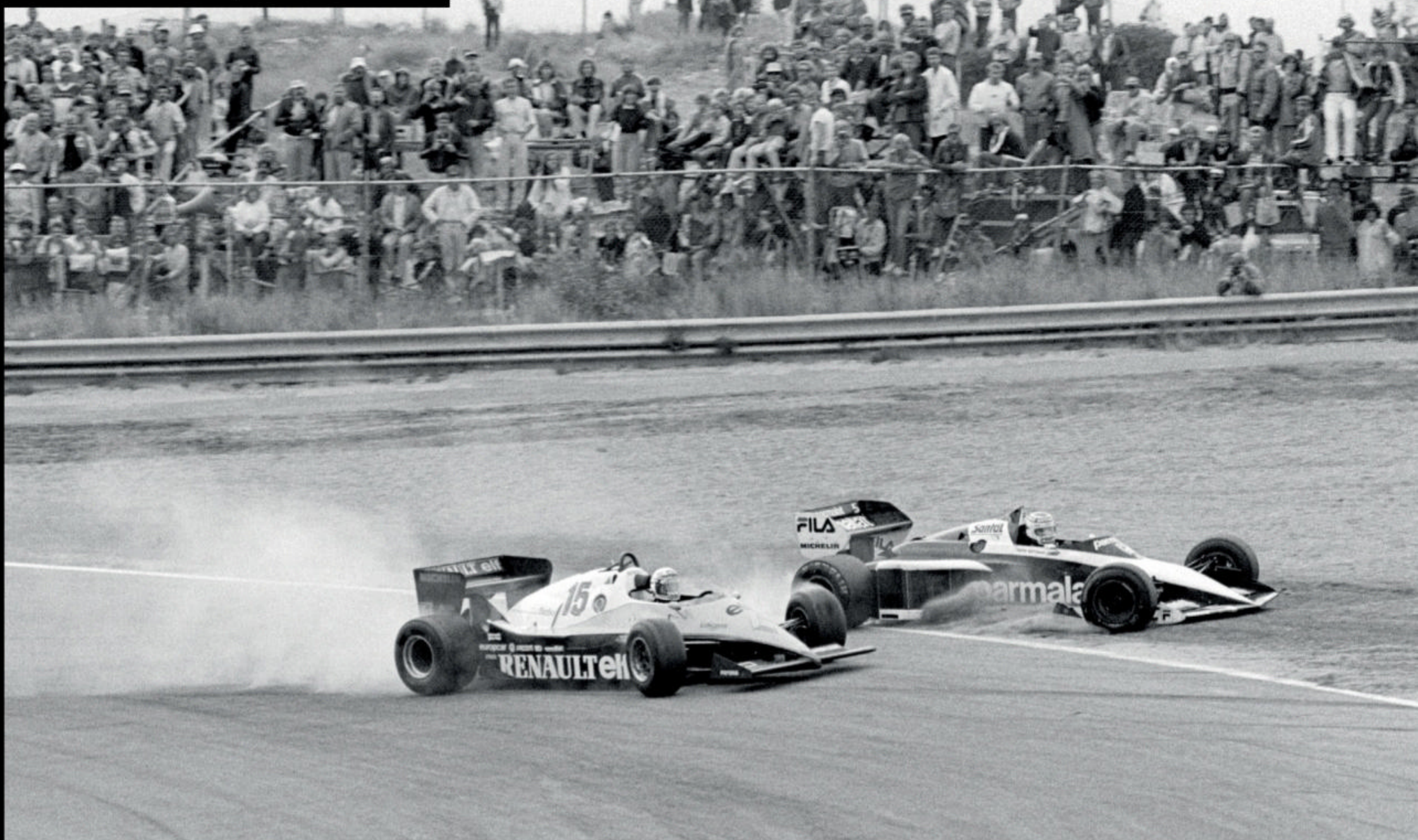
Double world champion Niki Lauda had come out of retirement in 1982 and was joined in a McLaren dream team for 1984 by Prost. Separated by half a point at the end of the year, unfortunately for Prost Lauda won his third title and Prost was runner-up for a second consecutive year



It's one of F1's most infamous incidents when McLaren team-mates Prost and Ayrton Senna, battling for the championship, tangled at the chicane on lap 46 of the 1989 Japanese GP. Prost retired, Senna restarted and won the race, only to be disqualified, handing the title to Prost



Prost was sacked by Ferrari at the end of 1991 but agreed, for a fee, not to drive for anyone in 1992. This didn't preclude testing and he drove a Ligier JS37 at Paul Ricard in January 1992, wearing Erik Comas's helmet, turning down a 1993 race seat with the team to sign for Williams instead



Prost was anxious to stretch his championship advantage at the 1983 Dutch GP but, after a number of laps following leader Nelson Piquet, he collected the Brabham when attempting a pass at the first corner, Tarzan. Piquet was out on the spot and Prost retired later in the lap with damage



Ahead of the 1993 Portuguese GP and with his fourth world title all but confirmed Prost, alongside McLaren debutant Mika Häkkinen, announced his retirement from F1. The prospect of Ayrton Senna joining him at Williams in 1994 is believed to have been one of the factors in Prost's decision to quit





In 1982 Prost won the opening race of the season in South Africa, so third at the next round in Brazil would have been a bit of a disappointment. However, after the podium had taken place Nelson Piquet and Keke Rosberg were disqualified, handing Prost an unexpected fifth F1 victory



When Prost joined McLaren in 1980 the team's mechanics nicknamed him 'Tadpole'... because he was a small 'frog' [Frenchman]. The name, not favoured by Prost, actually made it onto the side of his car in testing. Later in his career Prost became known by the more cerebral moniker 'the Professor'



Having left Ferrari under a cloud at the end of 1991 and unable to return to McLaren, Prost signed to drive for Williams in the 1993 season. The Williams FW15C was the class of the field but had Nigel Mansell not left in a huff after winning the 1992 title, over money and the prospect of Prost as his team-mate, Mansell could well have denied Prost what would be his fourth and final world title



Prost's first win of the 1982 season was anything but straightforward. To start with, it wasn't clear that the race would take place after a strike by the majority of drivers unhappy at new superlicence proposals. The race did go ahead and Prost, who had qualified fifth (well adrift of Renault team-mate René Arnoux), recovered from this puncture – which dropped him to eighth – to claim a superb win



MAURICE HAMILTON'S ALTERNATIVE VIEW

Opening-lap shunts have become a Silverstone trademark. But for sheer *carambolage* nothing has yet surpassed the one set in motion by Jody Scheckter in 1973...

PICTURES  motorsport
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IF ANYONE MOANS ABOUT cosmetic damage to a front-wing endplate during early scuffles in the British Grand Prix, they should be thankful John Surtees is no longer around to tell them what happened to him 50 years ago. The former world champion and team owner had all three of his cars written off at the end of the first lap in 1973. To make matters worse, it happened before his very eyes.

Surtees was not alone in being horrified by one of the most spectacular multiple collisions to mar any GP. F1 team members, watching from the elevated pit road at Silverstone, felt severely winded by the scene exploding beneath them, the sight of one car thumping into another acting like relentless punches in the solar plexus.

The pit straight resembled a wrecker's yard. Everyone feared the worst. The fact that there was no fire (commonplace then, particularly with cars full of fuel) and no serious injury was beyond comprehension. The sense of reassurance spread through the surrounding grandstands, this potential tragedy having been played out before several hundred shocked fans. I was among the many looking on in disbelief; our mouths opened and closed with no sound coming out.

This was before Silverstone had its heart transplant from Woodcote to The Wing in the next county. My Dad and I had chosen the

I REMEMBER SEEING SCHECKTER'S LEFT REAR KICKING UP THE DIRT AT THE EXIT. AND THEN AN UNEXPECTED BROADSIDE VIEW OF THE M23

Woodcote grandstand for many reasons: a perfect view of the starting grid arcing through the corner; visible pitstops; and, more than anything, the sight of the F1 cars appearing flat out at 170 mph and drifting through the long right-hander. We were ready to watch this 67 times, the leader coming through every 78 seconds or so.

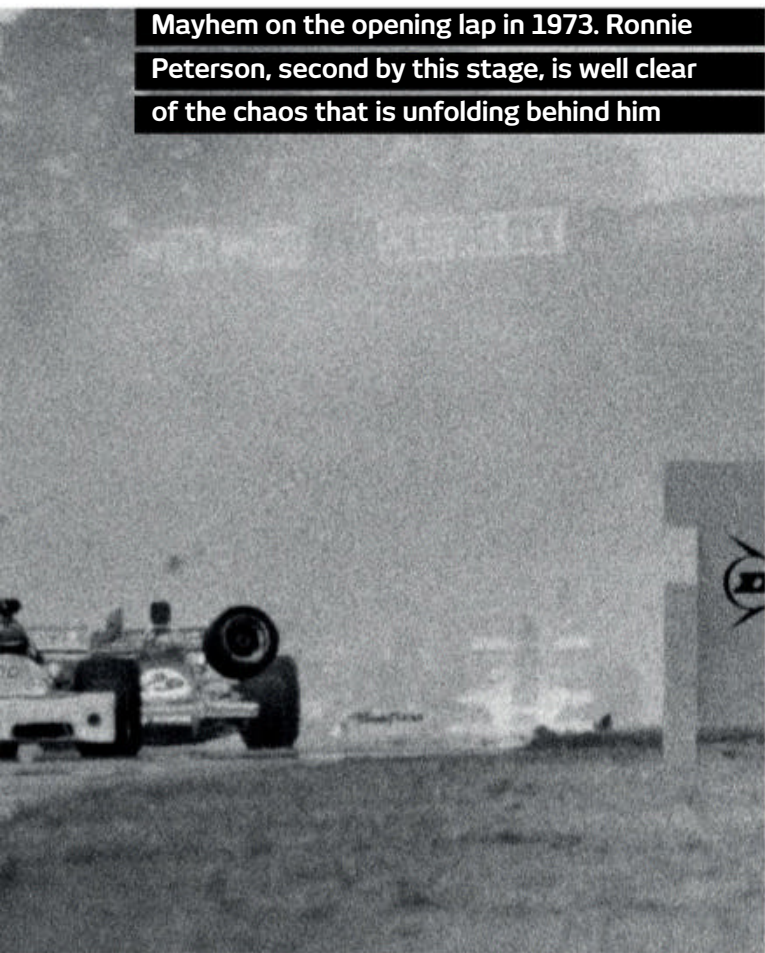
Who would be in front at the end of the first lap? Ronnie Peterson had moved to Lotus-Ford for 1973. It was like Max Verstappen going to Red

Bull after three years at the back of the grid; a thrilling talent finally given his head in a driveable car. Ronnie put the black and gold Lotus 72 on pole but we knew that was only half the battle, the season thus far not having gone Peterson's way. The Swede had only one victory to his name whereas Jackie Stewart, lurking on the second row in his Tyrrell, was leading the championship. Sharing the three-car front row with Peterson, the immaculate white McLarens of Denny Hulme and Peter Revson were also in the reckoning. But more intriguing was the driver of another McLaren M23 on the third row.

Saying Jody Scheckter had arrived in F1 with a bang was not the sort of thing to mention to Emerson Fittipaldi, the reigning champion. At the previous race in France (Scheckter's third in F1), the South African had collided with Fittipaldi while disputing the lead; Emerson claimed the move was never on; Jody said the Lotus driver had left the door open. Now here they were, with Fittipaldi just ahead on the second row.

It was a clean start, Stewart slotting in behind Peterson as the 28 cars swept into Copse. Using the element of surprise, Jackie dived down the inside at Becketts (then a single right-hander) to snatch the lead. Maximising his advantage, Stewart drove the rest of the opening lap on the absolute edge. The sight of JYS coming through

Mayhem on the opening lap in 1973. Ronnie Peterson, second by this stage, is well clear of the chaos that is unfolding behind him



Woodcote is indelible; the blue Tyrrell being held in one gloriously long drift, bucking uneasily over a bump near the apex and pulling away from the hapless Peterson. It was pure gold.

There was barely time to realise that Scheckter had got himself into fourth, ahead of Hulme. I remember seeing Scheckter's left rear kicking up the dirt at the exit. And then an unexpected broadside view of the M23. It was one of those chilling moments when you instantly knew this was not going to end well. Many years later, I asked Denny for his memory.

"Jody was quick, no question about that," said Hulme. "But you needed to keep an eye on him. Before the race I had a chat with him. I just said: 'Take it easy in the opening laps.' Something like that. So, there we are on the first lap and he comes whistling past me! He goes charging into Woodcote and you can see it all start to happen. He runs wide and, ever so slowly, away she goes into a big slide. I could see I was going to be OK because he went across me from left to right, heading for the pit wall. I just shot round the back of Jody and missed it all. Then I looked in my mirror and saw all hell had broken loose."

Scheckter had managed to reach the pitwall without being touched. The resulting impact sent him rolling backwards as the remaining 20 or so drivers hammered through Woodcote at full bore.



Scheckter puts his wheels on the grass exiting Woodcote on the opening lap, setting in play the chain of events that caused the huge crash



The March of Roger Williamson (above) was one of nine cars that didn't take the restart after the shunt, including the three Surtees



Amazingly, no one hit the McLaren amidships. But nine cars collided in high-speed avoidance. Mike Hailwood, Carlos Pace and Jochen Mass counted themselves very lucky to step unscathed from their wrecked Surtees TS14As. This was a colossal blow in every sense for the financially strapped little team from Kent.

Jody made his way to the pitlane, where he was grabbed by Phil Kerr, McLaren's team manager. "We'd better get you out of here," said Kerr. "Surtees is looking for you." A bit different to today when a certain team principal's first act would be seeking a TV camera for a good whinge about someone putting a wheel over a white line.



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THE CANADIAN GP
IN 5 KEY MOMENTS

Max dominated again and led from start to finish, but his challengers were closer to him in Montréal than they had been Barcelona

1 Verstappen equals Senna's 41 wins

After the race, Max Verstappen was talking numbers. The victory in Montreal was the 41st of his career (tying him with Ayrton Senna), as well as his Red Bull team's 100th. Red Bull has joined an elite club that previously included only four other teams: Ferrari, Williams, McLaren and Mercedes. So questions about these milestones were inevitable in the post-race press conference, especially as most of the other topics had been covered before the weekend. On Thursday, the usual F1 media

day, Max had to reiterate that he'd welcome more competition from his team's rivals, and once again denied that winning all the races bores him. If anything, he's probably more bored of answering the same questions.

So, even if he had little to say, there was nothing of substance to ask about except the numbers.

"Of course, to tie with Ayrton is something incredible. And of course, I'm proud of that, but I hope it's not stopping here," said Max on Sunday

after starting from pole, leading the entire race and winning. It was the third race in a row he had led the entire distance.

In Canada, however, Red Bull's advantage wasn't as great as it had been in Barcelona two weeks earlier. And the talk about the team's 'dominance', anyway, has to be tempered – since Red Bull has been 'dominating' with just one car since Monaco, and Montréal was no different. While Sergio Pérez failed to make Q3 for the third consecutive race weekend, Max once again thrived in the changeable conditions. His early Q3 lap on intermediates was 1.2s quicker than the nearest challenger – a role surprisingly taken up by Nico Hülkenberg.

The German from Haas benefited in part from setting his time when track conditions were at their best, crossing the line mere moments before the session was red-flagged following Oscar Piastri's crash. Nevertheless, Hülkenberg's efforts were commendable, since he managed to beat both Fernando Alonso and the Mercedes drivers who had finished their runs just before him – though he still ended up behind them on the grid. The rain had made it impossible for anyone to improve after the restart, but Hülkenberg was penalised for being too quick on the in-lap during the red flag.

Starting from pole, Max confidently maintained his position and once again faced no opposition on his way to victory. His lead at the finish line was only nine seconds, however – a substantial departure from the 25-second gap in Barcelona. That said, the race had been interrupted by the Safety Car on lap 12 (of 70) following George Russell's crash, without which Verstappen's eventual gap to Alonso would almost certainly have been greater.

However, there's reason to believe it could have been smaller under different circumstances, too. Alonso was second-fastest on Sunday. Aston Martin had brought a substantial upgrade package to Montréal and it seemed to work as planned. But starting from the front row, Alonso dropped behind Lewis Hamilton, making it very difficult to assess how well Fernando would have fared chasing Verstappen.

Mercedes has also improved significantly since the introduction of its own upgrade package in Monaco, but Lewis's W14 was still a touch slower than the Aston Martin in Alonso's hands in Canada. Fernando overtook Hamilton on lap 22, but by then – just six laps following the restart – Max had managed to build a gap of almost three seconds. It's also worth noting that Fernando had to slow down towards the end of the race at the team's

PICTURES: STEVEN TEE; ANDY HONE

request as Aston engineers suspected a problem with the fuel system.

At the very least, the Canadian GP provided a reason to wonder if Red Bull's speed advantage has shrunk. For the first time this season, barring Australia with its Safety Car conclusion, Red Bull's lead at the finish didn't exceed ten seconds. "I don't think it was our best day," Verstappen cautioned. "But I also know with their updates, they of course improved. So, for sure, they got closer to us."

2 Ferrari wishes every day was like Sunday

It would have been an anomaly for modern Ferrari if the weekend in Canada had gone off without a hitch, but on Sunday after the race the red team had plenty to be happy about, both in terms of car pace and the strategic choices made.

However, a near-perfect race on Sunday came after a rather poor Saturday, where the Ferrari drivers could do no better than 10th and 11th on the grid. After a chaotic session, Charles Leclerc once again criticised the team's strategists for not heeding his request to switch to slicks at the start of Q2. Leclerc was told to do a banker lap on intermediates which meant he missed the ideal time to switch to slicks. The rain then intensified and Charles was unable to make it into Q3. "I had a clear opinion, and we decided to do something else – so I am frustrated," lamented the driver.

Saturday wasn't easy for his team-mate either. Carlos Sainz made it into Q3, but then only placed eighth and in addition picked up a penalty for having impeded Pierre Gasly.

Contrastingly, Ferrari's race was run to near



Sunday in Canada provided some joy for Ferrari after a disappointing qualifying on Saturday, with Leclerc coming home fourth

perfection. Not only did the team's strategists make no mistakes on Sunday, they even managed to outsmart their rivals. The Ferrari drivers were the only ones on mediums not to pit during the Safety Car period, making the one-stop strategy work, despite Pirelli's pre-start prediction that it would be the slowest of the four most likely strategies.

Tyre wear was less severe than expected and the strategy not only allowed Leclerc and Sainz to gain several positions without a fight, but also meant they spent most of the race in clean air – which in turn provided another reason for optimism. From lap 42, when Verstappen made his second and final pitstop, until the end of the race, Leclerc and Sainz were running almost at the same pace as the Red Bull. Within the 28 laps, Leclerc's deficit to Max had only grown from 12 to 18 seconds.

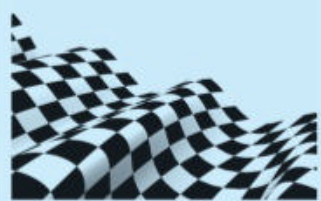
"It was a good Sunday," Scuderia boss Frédéric Vasseur summed up the afternoon. "Now we don't have to draw conclusions about the situation of the season after one race. You know that Montréal is a bit different, that it's a lot about [how to deal with] kerbs, and the track being green. But it's true we're going in the right direction."

3 Albon does it again

"They like to just put me out in front, and [tell me] 'stay in front and defend for the whole race'. I'm used to it now. I've done that race many times,"

Albon moved into seventh when his rivals pitted and he didn't, and then held them off to record his best finish for Williams





FINISHING STRAIGHT

RACE DEBRIEF

F1 WORLD CHAMPIONSHIP ROUND 9

smiled Alex Albon on Sunday evening. He'd just secured his best result for Williams, in a similar fashion to the Melbourne race which had earned him his first point with the Grove team just over a year ago. On that day Albon managed to run almost the entire distance on one set of tyres, making his only pitstop with a lap to go to finish 10th.

It wasn't as extreme this time. But Williams once again played its two biggest trump cards – Alex's ability to save tyres and the decent straightline speed of its car.

Starting from ninth on the grid after a good qualifying session (which included the fastest lap in Q2), Albon, like most of his rivals, swapped out his starting set of medium tyres at the end of lap 12 under the Safety Car. But unlike Esteban Ocon and the two McLaren drivers, who were ahead of him throughout the first half of the race, he never came in for a second pitstop.

And it worked well. Tyre wear was lower than predicted and Williams had the pace. The team, as Alex pointed out in his post-race interviews, "worked absolutely flat out" to bring an upgrade package to Canada, one of the best tracks on the calendar for Williams – and Albon did everything

possible to reward his team for its faith in him, having been the sole Williams driver to get updates.

Moving up to seventh after his main rivals had stopped, Alex was able to run in the clear for a while until a queue of five cars formed behind him around lap 50. The straightline speed advantage was a great defensive weapon but, from that moment on, Albon had no margin for error – and made none. He left first George Russell, who had managed to rejoin the race after his crash, and then (after the Mercedes driver finally retired with brake problems) Esteban Ocon without a chance to get past.

"They had to sacrifice weekends, working day and night to get the car ready for Canada," said Albon of his colleagues in Grove. "It felt like 'oh my god, we're putting all our eggs into this race' and I thought 'wow, OK, we've got to try and score points if we can'. And it's amazing we managed to do it."



4 Norris loses points after "unsportsmanlike" conduct penalty

Lando Norris finished ninth on the road, making some spectacular overtaking moves along the way, but was left without points – all because of a five-second penalty for 'unsportsmanlike behaviour'.

The incident, considered a breach of fair play, occurred during the Safety Car period. Lando had slowed down on the back straight, creating a gap to his McLaren team-mate so as to minimise the impact of the mechanics having to service both cars on the same lap. The stewards felt that Norris had delayed Alex Albon and Charles Leclerc, who were behind him, in an 'unsportsmanlike' manner.

Similar situations have arisen in F1 before, but this is the first time the stewards have penalised this as a breach of the International Sporting Code. It states that "any infringement of the principles of fairness in competition, behaviour in an unsportsmanlike manner or attempt to influence the results of a competition, in a way that

Norris battled his way to ninth, only to lose the position following a penalty given for his actions ahead of his first pitstop





Red Bull sporting advisor Helmut Marko and Pérez in Canada (top). After another bad race Marko hinted Pérez could be replaced...

is contrary to sporting ethics” must be penalised. Previously, drivers have been fined for driving “unnecessarily slowly”, but this somewhat vague wording leaves plenty of room for interpretation.

Norris’s boss Andrea Stella believes the FIA is looking to set a new precedent. “There is a possibility that the stewards want to set new references,” he said, noting that McLaren was “surprised” when Lando received his penalty. It was not uncommon in the past for such incidents to be ignored. The penalty dropped Norris to 13th, with ninth going to Lance Stroll, who pulled ahead of Valtteri Bottas just metres before the finish line.

5 Pérez enters dangerous territory

In the space of a few weeks, Sergio Pérez has gone from title contender to possibly the season’s biggest disappointment.

In Canada, Pérez failed to reach Q3 for the third time in a row following a crash in Monaco and an error in Barcelona. He was unable to set a competitive lap time in Q2 in mixed conditions,

ending up 12th on the grid. The team again tried to help him out with an alternative strategy – he was one of the few to start on the hard tyres and go for a one-stop – but in the end he could only manage sixth. Pérez wasn’t able to keep up with the Ferrari drivers, who had started just ahead of him.

In the end, the team pitted Checo for a new set of soft tyres, but the extra point for the fastest lap did little to brighten up a dismal weekend. Not only did Checo fail to exploit the car’s potential at the right moments on Saturday, he failed to do so again on Sunday. “We just didn’t have the pace today,” he admitted. “We did struggle. I think the Safety Car hurt us massively, it came at the wrong time. Luck isn’t on our side but that’s the way it is.”

Three bad weekends – across Monaco, Spain and Canada Pérez scored 21 points to Verstappen’s 76 – were enough for Red Bull sporting advisor Helmut Marko to hint at a possible parting of the ways. Speaking on Austrian TV, he said the team would be watching Daniel Ricciardo’s upcoming tyre tests with interest to assess the possibility of him returning as Verstappen’s team-mate. Pérez, Marko noted, can be happy that he has already been with the team “longer than he had planned anyway”.

“You just have to keep your options open as far as a replacement is concerned,” he concluded.

RESULTS ROUND 9

CIRCUIT GILLES VILLENEUVE /
16.06.23 / 70 LAPS



1st	Max Verstappen	Red Bull	1h33m58.348s
2nd	Fernando Alonso	Aston Martin	+9.570s
3rd	Lewis Hamilton	Mercedes	+14.168s
4th	Charles Leclerc	Ferrari	+18.648s
5th	Carlos Sainz	Ferrari	+21.540s
6th	Sergio Pérez	Red Bull	+51.028s
7th	Alex Albon	Williams	+60.813s
8th	Esteban Ocon	Alpine	+61.692s
9th	Lance Stroll	Aston Martin	+64.402s
10th	Valtteri Bottas	Alfa Romeo	+64.432s
11th	Oscar Piastri	McLaren	+65.101s
12th	Pierre Gasly	Alpine	+65.249s
13th	Lando Norris	McLaren	+68.393s*
14th	Yuki Tsunoda	AlphaTauri	+73.423s
15th	Nico Hülkenberg	Haas	+1 lap
16th	Zhou Guanyu	Alfa Romeo	+1 lap
17th	Kevin Magnussen	Haas	+1 lap
18th	Nyck De Vries	AlphaTauri	+1 lap

*includes 5s penalty for unsportsmanlike behaviour

Retirements

George Russell	Mercedes	53 laps/overheating
Logan Sargeant	Williams	6 laps/oil leak

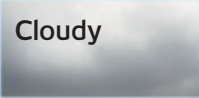
Fastest lap

Sergio Pérez 1m14.481s on lap 70

TYRE COMPOUNDS USED



CLIMATE



AIR TEMP

18°C

TRACK TEMP

27°C

DRIVERS’ STANDINGS

1 Verstappen	195pts	11 Norris	12pts
2 Pérez	126pts	12 Albon	7pts
3 Alonso	117pts	13 Hülkenberg	6pts
4 Hamilton	102pts	14 Piastri	5pts
5 Sainz	68pts	15 Bottas	5pts
6 Russell	65pts	16 Guanyu	4pts
7 Leclerc	54pts	16 Tsunoda	2pts
8 Stroll	37pts	17 Magnussen	2pts
9 Ocon	29pts	19 De Vries	0pts
10 Gasly	15pts	20 Sargeant	0pts





FINISHING STRAIGHT

RACE DEBRIEF

F1 WORLD CHAMPIONSHIP ROUND 10

THE AUSTRIAN GP IN 5 KEY MOMENTS

1 Verstappen clean sweep overshadowed by track-limits furore

On Red Bull's home turf Max Verstappen claimed pole position for both the grand prix and the sprint race, swept to an imperious victory in the sprint, then was leading by such a commanding margin in the grand prix itself that he was able to pit for soft tyres two laps from home and claim the point for fastest lap as he took the chequered flag in first place. And yet the conversation afterwards was dominated not by talk of this achievement but by the tedious procedural issue of track limits and the policing thereof.

It is never a good look for a televised sport to have to row back on a result after the broadcast has ended. So it was hardly surprising that, after a race in which several drivers lobbied the stewards to intervene by openly complaining about rivals

flouting track limits, the issue left a sour tang in the mouth. Owing to a post-race protest by Aston Martin the final result wasn't published until 9.46pm local time, nearly five hours after the provisional document. Why? Because no fewer than 1200 individual cases of track-limit violations had been reported to race control and rigour required they all be examined.

Fortunately the podium was left untouched but six drivers lost positions, including three in the top 10. Fernando Alonso and Lance Stroll each gained a place, which means interventions by Aston Martin sporting director Andy Stevenson have now earned six points this year following his successful reversal of Alonso's penalty in Saudi Arabia. As our columnist Matt Kew wryly observed in *GP Racing's* sister title *Autosport*, he has scored more points than AlphaTauri.

All the violations occurred between Turns 9 and 10, the two right-handers which lead on to the start-finish straight. In the circuit's original incarnation this was one long, sweeping bend,

named after local hero Jochen Rindt after his death in 1970, but the greedy and grasping demands of nearby landowners forced it to be cut back and squared off when the track was modernised in the 1990s. Since the short strip between the two corners is now bordered by asphalt run-off, drivers carrying too much speed can easily put all four wheels over the white lines and get back on track.

Doing this caused Verstappen's team-mate Sergio Pérez to have his best Q2 times deleted on Friday, meaning he would start 15th on the grid; and on Saturday several other drivers, including Lewis Hamilton, lost out during the 'shootout' for the sprint race. It was therefore known from early in the weekend that it was too easy to transgress at Turns 9 and 10 – and very little in terms of proactive measures were taken. McLaren boss Zak Brown likened the scenario to the farcical 2021 Belgian Grand Prix, where heavy rain forced long delays and then a red flag after three Safety Car laps, and the 2005 Indianapolis Grand Prix, where just six cars started the race owing



Max's exploits in winning the sprint and grand prix from pole and claiming the fastest lap were overshadowed by track-limits issues

Hamilton was just one of many drivers to fall foul of track limits in Austria. In the race his penalty pushed him down to eighth



Pérez failed to make it Q3 again after having all his best Q2 times deleted due to track-limits infringements, leaving him 15th on the grid



PICTURES: STEVEN TEE; ZAK MAUGER; ANDY HONE; MARK SUTTON

Although Leclerc and Sainz started the GP second and third they were unable to challenge Verstappen from the off



to a dispute over tyre safety.

"I think where we need to do better as a sport, is we all kind of thought what happened on Sunday could happen," he said. "And yet we just kind of watched it happen."

2 Ferrari "struggling for positives" despite podium

Charles Leclerc finished second in the Austrian GP while team-mate Carlos Sainz equalled his best result of the season in fourth. But it was clear key weaknesses remain in the Ferrari technical package despite the recent comprehensive upgrade.

Sainz was lucky to start fifth in the sprint after a brake-by-wire issue forced him to sit out the first portion of a shootout session held on a damp but drying track; fortunately his only timed lap was good enough for him to progress and he suffered no further problems. Leclerc, though started a penalised ninth after being adjudged to have impeded McLaren's Oscar Piastri.

The sprint got under way with the Red Bull drivers starting on the front row almost coming to blows twice, resulting in Pérez briefly falling behind Nico Hülkenberg's Haas. Sainz made short work of Lando Norris in the McLaren and also overhauled Hülkenberg to finish third, two seconds behind

Pérez, while Leclerc laboured to 12th.

In the grand prix itself Leclerc and Sainz started second and third behind Max Verstappen but Max got out of DRS range before the system was even activated. He gradually pulled away as Sainz put Leclerc under pressure and lobbied the pitwall to execute a driver swap. No such agreement was forthcoming and Sainz's proximity to Leclerc cost him when Hülkenberg's retirement triggered a brief Virtual Safety Car on lap 14 and Ferrari double-stacked its drivers in the pits. Both Ferrari drivers had passed the pitlane entry when it was called, forcing them to complete another lap – and then it was lifted before Sainz reached the pit exit.

Verstappen didn't pit at this point, enabling Leclerc to hold the lead briefly after Max pitted at the end of lap 24. This didn't last long even though Max was on hard-compound Pirellis while Charles had a second set of mediums. The VSC stop meant Sainz lost track position to Lewis Hamilton and Norris; he blamed having to fight past them for taking life out of his second set of mediums and causing him to earn a five-second penalty for track limits while he was "on fire" with rage. He would also lose out to the resurgent Pérez later in the race, finishing fourth on the road – then classified sixth after a further penalty. Leclerc was five seconds off Verstappen at the end, a margin flattered by Max stopping late to make a tilt for the fastest-lap point.

Ferrari had brought a revised floor and front wing as an incremental update to the major package



Sainz battled his way back past Hamilton (above) after the VSC but was unable to defend for long against Verstappen (below)



introduced in Spain. But both drivers reported performance was still sub-optimal in high-speed corners and Sainz remained critical of how the pitwall dictated his race.

"I was managing my tyres at the same time I was attacking," said Sainz. "That's why I'm frustrated because I struggle to see the positives on this P4 with the pace and overtaking and defending I did." ▶



FINISHING STRAIGHT

RACE DEBRIEF

F1 WORLD CHAMPIONSHIP ROUND 10



Hamilton takes a look at one of the Aston Martins in parc fermé. The customer engine team outscored Mercedes in Austria

3 Mercedes baffled by sluggish car performance

Aston Martin again outscored its engine supplier as Mercedes endured what team boss Toto Wolff called a “bruising” weekend. Lewis Hamilton even went so far as to compare the recently updated W14’s performance characteristics with those of its troubled predecessor.

The main issue was a lack of rear-end stability which has persisted from the W13 through to the W14 and its B-spec. Reliability also caused problems as George Russell missed the sprint shootout second session due to a hydraulics failure which consigned him to 15th on the grid in that race. Not for the last time, Hamilton was frustrated by a track-limits penalty that left him 18th.

Fernando Alonso and Lance Stroll started sixth and seventh and Alonso could have challenged Sainz for third had he not fallen behind Lance at the start. Russell claimed a point in eighth and it would be a similarly challenging journey from 11th on the grid to seventh in the grand prix on Sunday.

For the main event Stroll had outqualified Alonso, who started the race on hards, but he lost out at

Turn 1 as Hamilton slipped around the outside of Norris for fourth, causing the McLaren to check, which forced Stroll to back off. Mercedes took advantage of the VSC to pit both cars while Aston waited another lap, which cost them track position.

But Hamilton was struggling under braking and with a lack of downforce at the front end, having backed off the front wing angle too much in the hope of balancing the W14’s rear. Norris was able to pass the struggling Merc on lap 29 and a penalty for track limits helped Alonso and Sergio Pérez by. Having finished seventh on track Lewis lost another place to Russell through his post-race penalty.

“We knew we had a really bad rear end, so we took out a lot of front wing to try and keep that balance,” said Lewis. “We massively overdid it. I was almost full lock around the last two corners. Going into Turn 10 I was just sliding, and I couldn’t do anything about it.”

4 Norris makes the most of upgraded McLaren

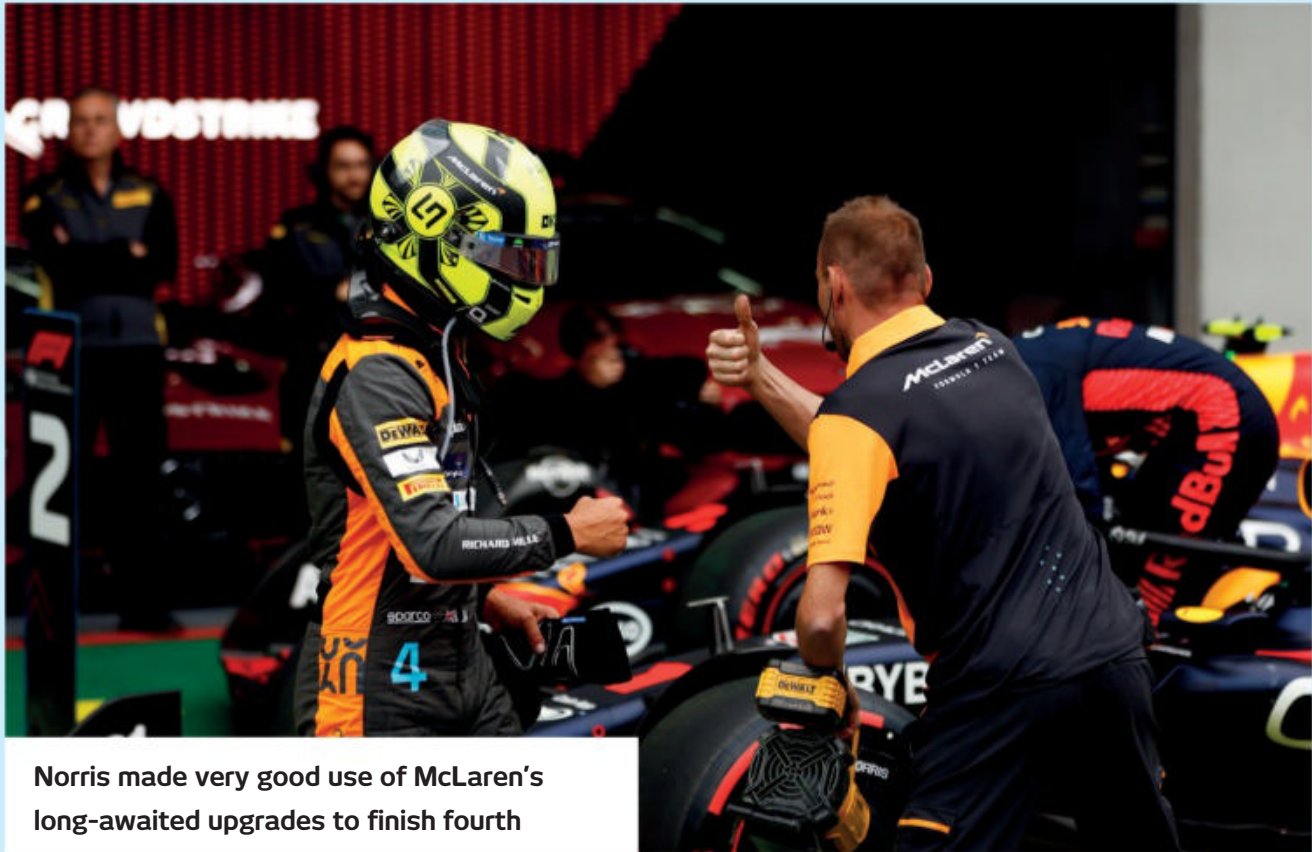
McLaren’s mid-season performance update to the struggling MCL60 has been so substantial –

team principal Andrea Stella said it “affects every aerodynamic part” – that it is being rolled out in stages over the Austrian, British and Hungarian GP weekends. Lando Norris received the first batch of new components and, judged purely by the race results, the effects have been transformative: Norris qualified in the top four for both the sprint and the grand prix at the Red Bull Ring, and was fifth on the road on Sunday. That became fourth after Carlos Sainz’s post-race penalty – while Oscar Piastri languished in 16th place having started 13th.

The reality is more nuanced as deep-seated issues remain on the car, while Piastri’s result was influenced by circumstances beyond his control. He was forced to make an extra stop after losing his front wing when Kevin Magnussen braked early and sharply to avoid a potential collision with the battling Lance Stroll and Yuki Tsunoda at Turn 3.

“I was a bit nervous coming into the race, that the race pace was going to let us down today but it was better than I was expecting,” said Norris. “It’s still not great, Fernando [Alonso] was clearly quicker by a chunk every lap, and I’m almost crashing in every corner. The car goes quicker around every corner but the way you have to drive is exactly the same, which is our next issue to tackle... it’s not just about downforce, it’s about handling.”

PICTURES: ZAK MAUGER, MARK SUTTON



Norris made very good use of McLaren's long-awaited upgrades to finish fourth



Piastri, sans upgrades, was closer to Norris in the sprint, but struggled in the main race

5 Alpine pins hopes on upgrades

While the Alpine team was able to trumpet a key investment by a US consortium involving three Hollywood actors ahead of the Austrian GP, on track there was little reason for cheer. The team acknowledged it has fallen behind rivals in the development race and needs its new front wing (scheduled for Silverstone) and floor (to be introduced in Belgium) to work. Pierre Gasly was ninth on the road in Austria but lost a place to a 10s post-race penalty, while Esteban Ocon was 12th but classified 14th – and was the most-

penalised driver of the race, losing 30 seconds. “Ultimately we want to fight for better positions,” said Gasly. “I was chasing Fernando [Alonso] at the start of the race, and I was consistently losing two or three-tenths. “That’s what we’re lacking at the moment to really take the fight to the two Mercedes, and Alonso in front of us. I will say those two or three-tenths compared with Mercedes and Aston is probably what we’re missing since the start of the year. McLaren did a big step. Is it only us?”

Gasly did score a point in Austria but Alpine has fallen down the order in recent races



RESULTS ROUND 10

RED BULL RING / 02.07.23 / 71 LAPS



1st	Max Verstappen	Red Bull	1h25m33.607s
2nd	Charles Leclerc	Ferrari	+5.155s
3rd	Sergio Pérez	Red Bull	+17.188s
4th	Lando Norris	McLaren	+26.327s
5th	Fernando Alonso	Aston Martin	+30.317s
6th	Carlos Sainz	Ferrari	+31.377s**
7th	George Russell	Mercedes	+48.403s
8th	Lewis Hamilton	Mercedes	+49.196s**
9th	Lance Stroll	Aston Martin	+59.043s
10th	Pierre Gasly	Alpine	+67.667s**
11th	Alex Albon	Williams	+79.767s**
12th	Zhou Guanyu	Alfa Romeo	+1 lap
13th	Logan Sargeant	Williams	+1 lap*
14th	Esteban Ocon	Alpine	+1 lap**
15th	Valtteri Bottas	Alfa Romeo	+1 lap
16th	Oscar Piastri	McLaren	+1 lap
17th	Nyck de Vries	AlphaTauri	+1 lap**/**
18th	Kevin Magnussen	Haas	+1 lap*
19th	Yuki Tsunoda	AlphaTauri	+1 lap**

*includes 5s penalty for exceeding track limits (Ocon x2) **includes 10s penalty for exceeding track limits (Ocon x2) ***includes 5s penalty for forcing another driver off the track

Retirements

Nico Hülkenberg Haas 12 laps/power unit

Fastest lap

Max Verstappen 1m07.012s on lap 71

F1 Sprint - 17 laps

1st Verstappen 2nd Pérez 3rd Sainz
4th Stroll 5th Alonso 6th Hülkenberg
7th Ocon 8th Russell

TYRE COMPOUNDS USED



CLIMATE

Partially cloudy

AIR TEMP

25°C

TRACK TEMP

45°C

DRIVERS' STANDINGS



1 Verstappen	229pts	11 Gasly	16pts
2 Pérez	148pts	12 Hülkenberg	9pts
3 Alonso	131pts	13 Albon	7pts
4 Hamilton	106pts	14 Piastri	5pts
5 Sainz	82pts	15 Bottas	5pts
6 Leclerc	72pts	16 Guanyu	4pts
7 Russell	72pts	17 Tsunoda	2pts
8 Stroll	44pts	18 Magnussen	2pts
9 Ocon	31pts	19 Sargeant	0pts
10 Norris	24pts	20 De Vries	0pts



FINISHING STRAIGHT

RACE DEBRIEF

F1 WORLD CHAMPIONSHIP ROUND 11

THE BRITISH GP IN 5 KEY MOMENTS

1 McLaren comeback begins as Red Bull equals its 1988 record

Max Verstappen continued his remarkable run of success in 2023 by bringing Red Bull to the cusp of breaking yet another long-standing Formula 1 record, that of McLaren's 11 consecutive victories in 1988 with one of the greatest F1 cars of all time, the MP4/4. It was somehow fitting that as Red Bull pulled alongside that figure the much-loved British team should undergo a competitive renaissance on home turf, leading the chasing pack.

Lando Norris finished second and it should have been his McLaren team-mate Oscar Piastri completing the podium. But for the second race in succession an expiring Haas had a disruptive effect on the order behind the winner.

"Well navigated" was race engineer Gianpiero Lambiase's message to Max after the world champion secured pole position in a qualifying session fraught with perils thanks to the fickle Silverstone weather. Blustery winds combined with stop-start rain and intermittent sunshine to make tyre choice difficult for much of the hour

but conditions stabilised towards the end, making the final runs in Q3 crucial. Here some drivers improved more than others and Norris brought the crowd to its feet for a few brief moments by heading the timesheets before Verstappen assumed his usual position in P1.

For the first time both McLaren drivers had the latest spec but both they and the team were keen

to play down the significance of outqualifying Ferrari, Mercedes and Aston Martin as well as their more regular midfield rivals. The MCL60's fundamental weaknesses – balance, rear-end instability and a reluctance to change direction at low speeds – remain, but were compensated for at Silverstone by its strengths in high-speed corners and lower drag wrought by recent upgrades.

"While we've improved the car in terms of aerodynamic efficiency, we haven't made yet large enough improvements in terms of elements that can condition and can improve the race pace," cautioned team principal Andrea Stella.

Remarkably, though, the weather came to the rescue as the wind returned, rain clouds threatened and ambient temperatures dropped after a generally warm and sunny race morning. Both Norris and Piastri made better starts than a wheel-spinning Verstappen, who only just managed to keep Oscar in check as Lando surged into an early lead. It wasn't to last, as Max deployed DRS



McLaren's Zak Brown was overjoyed with the performance of Norris and the MCL60. Verstappen (above) just carried on winning



PICTURES: STEVEN TEE; STEVE ETHERINGTON; JAKE GRANT; JAMES SUTTON



Second-placed finisher Norris is warmly congratulated after the race by fellow Brit Russell, with Pérez looking on

Hamilton recovered from this first lap error at Abbey to take the final podium slot, aided by being able to pit under the Safety Car



The Safety Car also allowed Hamilton to briefly challenge Norris for second but the pace of the McLaren blew Hamilton away



to seize the lead at Brooklands on lap five, but the McLarens were able to keep him in sight and open a gap on a chasing pack led by a battling Charles Leclerc and George Russell.

When Kevin Magnussen's Haas came to a smoking halt for a second time this weekend on lap 33, Piastri had already pitted for hard tyres. Race control signalled Virtual Safety Car conditions, then upgraded it to a full Safety Car when it became clear a recovery truck would have to be deployed on track. This in effect gave a free stop to Verstappen, Norris and Lewis Hamilton, costing Piastri a position but also putting Lando at risk – because McLaren had put him on new hard-compound tyres while Hamilton was on a set of used softs.

That meant Norris had to work hard to keep Hamilton behind him after the track went green but he succeeded, finally breaking out of DRS range although he incurred a black and white flag for breaching track limits in doing so.

"Under the VSC we were happy to go on hard tyres because it wouldn't have been a problem in terms of warm-up," explained Stella. "But then the VSC was converted into a Safety Car when we were pitting, and everything was ready to put hard tyres on. A last-minute change to softs would have been an operational problem."

2 Mercedes survives McLaren 'wake-up call'

Appropriately enough with the Tour de France in full swing, "chapeau" was Mercedes boss Toto Wolff's message to McLaren after a race in which the upgraded MCL60 had the upper hand over what is in effect a B-spec W14 (see p42). Strategy, opportunism and the timing of the Safety Car ultimately enabled Mercedes to overcome a pace deficit and put Lewis Hamilton on the podium after a relatively disappointing qualifying.

George Russell was sixth on the grid with Hamilton seventh, separated by 0.056s – but over 0.4s down on Max Verstappen and behind the McLarens and both Ferraris. Hamilton was vociferous about McLaren's adoption of Red Bull-style sidepods and, in a not very coded message to his own engineers, described McLaren's performance as "a wake-up call – others have overtaken us and we need to do more".

But Mercedes was typically slick in its race operations, running a split strategy in which Russell was an outlier, starting the race on soft Pirellis while the majority of the grid (including Hamilton) ran mediums. Encouraged by the longevity of the softs

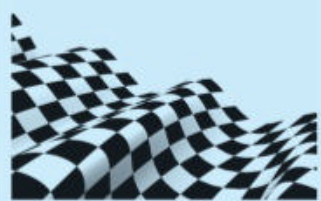
during long runs on Friday, Mercedes believed it could run both drivers on one-stops with Hamilton going on to softs for the second stint. The default strategy elsewhere was medium-hard; Pirelli had been anticipating this to be a two-stop race until conditions changed in the hour before the start.

As such, Russell harried Charles Leclerc's Ferrari throughout the opening stint after passing Carlos Sainz early on, and stayed out when Leclerc stopped for hards on lap 18. His remarkable work in keeping the softs alive until lap 28 was undone by the Safety Car, which gifted his team-mate a free stop and enabled Hamilton to undo the damage he'd done running wide at Abbey on the opening lap.

Having leapfrogged Russell, Hamilton attacked Norris after the Safety Car restart but wasn't able to get by a McLaren he described as "a rocket ship" in a straight line. Wolff declared himself "no more than happy" since this is a track where Mercedes has traditionally performed well for over a decade.

"The car wasn't where we've seen it here in previous years," he said. "The car remains a handful. It [McLaren's upturn in performance] is good to see because it shows if you make the right decisions you can move forwards."

"That thing [the McLaren] was rapid through the high-speed corners," said Hamilton. "I couldn't keep up, but we had a good little battle on the restart." ▶



FINISHING STRAIGHT

RACE DEBRIEF

F1 WORLD CHAMPIONSHIP ROUND 11

3 Williams beats Ferrari as landmark beckons

Charles Leclerc and Carlos Sainz started fourth and fifth for Ferrari at Silverstone but finished ninth and 10th – behind the Williams of Alex Albon, whose team-mate Logan Sargeant crossed the line just over 3s behind Sainz. Williams had hoped this race would be its 800th (a feat *GP Racing* commemorates this issue and which the team marked with a special livery), but the cancellation of the Emilia-Romagna GP pushed that back to Hungary.

Although the Safety Car was chiefly to blame for scuppering Ferrari's plans, its drivers also bemoaned the car's inconsistency, a trait which seems baked in since it hasn't been purged by recent upgrades. Leclerc spent his opening stint on mediums being challenged by soft-shod George Russell and, when none of the other frontrunners followed his early stop for hards (indeed, Russell managed another 10 laps on his softs), he was left in traffic outside the top 10. The VSC enabled him to stop again for another set of mediums but he

still emerged behind Albon – and was lucky not to be penalised for an unsafe pitlane release as Ferrari launched him almost into the path of the Williams.

Albon benefited from the VSC by making his sole stop just after it had been called, and shortly before the Safety Car was deployed. Sainz had stopped for hards just six laps earlier and, after some debate with the pitwall, elected not to stop again in the hope that he might preserve track position. But it wasn't to be and he slipped from seventh to 10th as Sergio Pérez, Albon and Leclerc fought their way by

on softer rubber – a gripping battle indeed.

"There's still a long way to go because at the moment, we seem still very sensitive to the change of conditions," said Leclerc. "When I say change of conditions, I mean mostly the wind. When we have a change of wind our car is extremely difficult."

"A very tricky car to drive again, very difficult to be consistent in these conditions," said Sainz. "We were certainly struggling a lot on traction in all the tailwind. We couldn't get on the power and also a harder tyre made the fighting very tricky."

4 Aston Martin and Alpine in the wars

Aston Martin endured a somewhat anonymous weekend – at least so far as results were concerned – and the extent to which Fernando Alonso was miffed became evident after the chequered flag as he accelerated past the podium finishers on the slow-down lap and dumped his AMR23 in parc fermé as soon as possible. Alonso recorded his worst qualifying result of the season



Albon beat both Ferraris at Silverstone. Getting out ahead of Leclerc when he made his only stop (below) was crucial



PICTURES: STEVEN TEE; STEVE ETHERINGTON; JAMES SUTTON;

at Silverstone – ninth – and was unable to make any headway after passing Alex Albon and Lewis Hamilton for seventh place at the start.

While pitting under the Safety Car enabled him to consolidate his position ahead of the Ferraris, which had already stopped, Alonso lost a place to Hamilton in those stops and then another to Sergio Pérez after the restart, finishing seventh.

“We were slow all weekend,” he lamented. “I think P7 was better than the pace we had. Other teams were flying out there and finished P9 and P10.”

At least he fared better than team-mate Lance Stroll, who was eliminated in Q2 and started 12th. Lance had trouble with track limits all weekend, having to use an extra set of tyres to get through Q1 after having his best time deleted, leaving him just one set for Q2. In the race he found himself embroiled in battle with the sole remaining Alpine of Pierre Gasly (Estaban Ocon being an early retiree with a hydraulic leak) and appeared to stray beyond the white line at Stowe while executing a forceful overtake for 11th place late on. While he escaped sanction for that, Lance then clonked into Gasly at the Club chicane after Pierre had repassed him and they had both got by Carlos Sainz. This earned Stroll a five-second penalty but the contact had terminally damaged Gasly’s right-rear suspension.



Pérez recovered to sixth after his qualifying woes but with Verstappen winning race after race his Red Bull future must be questioned

5 Screw turns on Pérez after another Q1 exit

For a fifth consecutive race Sergio Pérez failed to make it into Q3. And, although he had a solid race from 15th to sixth, the whisperings over his Red Bull future seemed to be beginning again after being briefly quelled by his race-day showing in Austria.

There were familiar elements to the narrative of Pérez’s woe. Having lap times deleted owing to track-limits violations left him just one opportunity to set a fast lap in Q1. When the session was red-flagged with just over three minutes left on the clock, it was imperative that Pérez was at the head of the queue when the session resumed so he has a clear track. But the recovery of Kevin Magnussen’s Haas took longer than anticipated and he lost tyre temperature while waiting for a green light at the pit exit. He also conceded that cool and changeable weather exacerbated his difficulties in maximising the RB19’s potential.

“My issues with the car become more apparent in the changeable conditions,” Pérez said. “It’s something we as a group need to get on top of and understand what we’re able to do better.”

RESULTS ROUND 11 SILVERSTONE / 09.07.23 / 52 LAPS



1st	Max Verstappen	Red Bull	1h25m16.938s
2nd	Lando Norris	McLaren	+3.798s
3rd	Lewis Hamilton	Mercedes	+6.783s
4th	Oscar Piastri	McLaren	+7.776s
5th	George Russell	Mercedes	+11.206s
6th	Sergio Pérez	Red Bull	+12.882s
7th	Fernando Alonso	Aston Martin	+17.193s
8th	Alex Albon	Williams	+17.878s
9th	Charles Leclerc	Ferrari	+18.689s
10th	Carlos Sainz	Ferrari	+19.448s
11th	Logan Sargeant	Williams	+23.632s
12th	Valtteri Bottas	Alfa Romeo	+25.830s
13th	Nico Hülkenberg	Haas	+26.663s
14th	Lance Stroll	Aston Martin	+27.483s*
15th	Zhou Guanyu	Alfa Romeo	+29.820s
16th	Yuki Tsunoda	AlphaTauri	+31.225s
17th	Nyck De Vries	AlphaTauri	+33.128s
18th	Pierre Gasly	Alpine	+6 laps/damage

*includes 5s penalty for causing a collision

Retirements

Kevin Magnussen	Haas	31 laps/engine
Esteban Ocon	Alpine	9 laps/hydraulics

Fastest lap

Max Verstappen 1m30.275s on lap 42

TYRE COMPOUNDS USED

Hard (C1)	Medium (C2)	Soft (C3)	Inter	Wet

CLIMATE	AIR TEMP	TRACK TEMP
Partially cloudy	23°C	35°C

DRIVERS’ STANDINGS

1 Verstappen	255pts	11 Piastri	17pts
2 Pérez	156pts	12 Gasly	16pts
3 Alonso	137pts	13 Albon	11pts
4 Hamilton	121pts	14 Hülkenberg	9pts
5 Sainz	83pts	15 Bottas	5pts
6 Russell	82pts	16 Guanyu	4pts
7 Leclerc	74pts	17 Tsunoda	2pts
8 Stroll	44pts	18 Magnussen	2pts
9 Norris	42pts	19 Sargeant	0pts
10 Ocon	31pts	20 De Vries	0pts





FINISHING STRAIGHT

RACE PREVIEW

F1 WORLD CHAMPIONSHIP ROUND 13

BELGIAN GP

28-30 July 2023
Spa-Francorchamps

PICTURE: MICHAEL POTTS. ILLUSTRATION: ALAN ELDRIDGE

THE MAIN EVENT

Magnificent Spa-Francorchamps, one of *the* greatest racing circuits even in its truncated modern form, has coped with many threats to its existence. Shaky promoters, threats of driver boycotts, a few skipped years owing to the ban on tobacco advertising – it's survived them all while adapting to modern safety standards, including a massive project to expand the run-off at Raidillon. The only factor that's constant is the fickle Ardennes weather which can make racing treacherous.

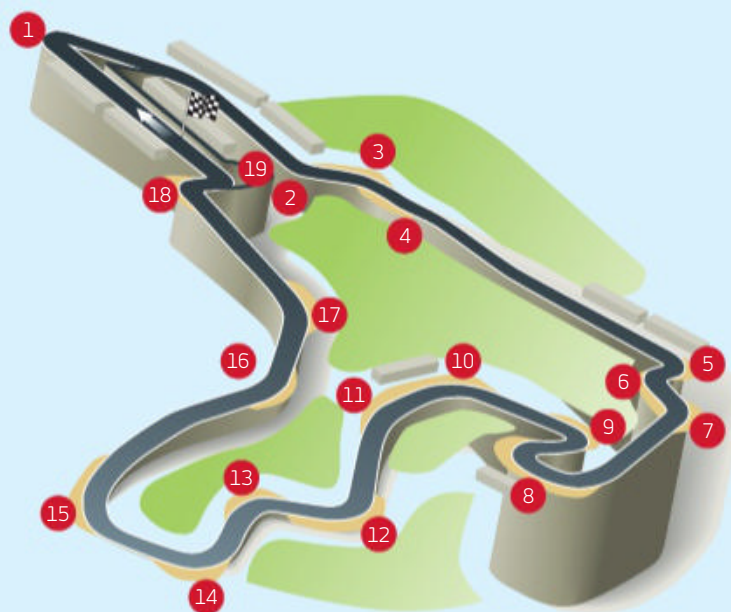
F1's new sprint format is perfectly suited to this environment. The sprint itself and the 'shootout' which defines the grid happen on Saturday, with qualifying in the late afternoon on Friday. Surely it can't rain every day?

2022 RACE RECAP

It was another Red Bull masterclass as Max Verstappen proved he can win from pretty much anywhere, storming through from 14th on the grid to a 1-2 finish with team-mate Sergio Pérez. Despite being fastest in qualifying Max was theoretically destined to start at the back, having exceeded his annual quota of power unit elements, but seven other drivers (including Ferrari's Charles Leclerc) were in a similar position – requiring a lot of head-scratching by the officials. A definitive starting order wasn't published until 1pm on race day.

Despite an early Safety Car period neutralising the field, Max was leading by lap 12. Pérez survived a bad start to finish second, while Leclerc was fifth on the road but demoted to sixth by a penalty for speeding in the pitlane.

KEY CORNER: TURN 5 Coming at the end of the Kemmel Straight, Les Combes is one of the main overtaking opportunities on the lap and a place where it can all go wrong, as Lewis Hamilton found when he tried to pass Fernando Alonso there last year...



RACE DATA

Venue Circuit de Spa-Francorchamps
First GP 1950
Number of laps 44
Circuit length 4.352 miles
Race distance 191.414 miles
Lap record 1m46.286s Valtteri Bottas (2018)
F1 races held 55
Winners from pole 21
Pirelli compounds C2, C3, C4

CAR PERFORMANCE

Downforce level Medium
Cooling requirement Low
Full throttle 60%
Top speed 214mph
Average speed 137mph

TIMETABLE (UK TIME)

Friday 28 July
Practice 1 12:30-13:30
Qualifying 16:00-17:00
Saturday 29 July
Sprint shootout 11:00-11:44
Sprint 15:30-16:30
Sunday 30 July
Race 14:00
Live coverage Sky Sports F1
Highlights Channel 4

THE PAST FIVE WINNERS HERE



2022
Max
Verstappen
Red Bull



2021
Max
Verstappen
Red Bull



2020
Lewis
Hamilton
Mercedes



2019
Charles
Leclerc
Ferrari



2018
Sebastian
Vettel
Ferrari

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If you want to drive the new Las Vegas circuit before any F1 cars turn a wheel there for real, look no further than the latest version of the official Formula 1 game franchise.

There's a new narrative thread to enjoy in the Braking Point soap opera mode, introduced in 2021. Another new feature is F1 World, which is in effect a development of the F1 Life mode introduced in F1 22. Rather than progress through a championship, players can engage in

daily, weekly or seasonal challenges to earn rewards in the form of car upgrades (as in FIFA, these can also be obtained via in-game purchases)

Driveability is much-improved over last year's cumbersome cars, particularly when using a traditional controller. At the time of writing there is no support for TrueForce, the proprietary force-feedback system used by high-end Logitech steering wheels, but this is understood to be in the pipeline for a subsequent patch.

FORMULA 1 DRIVE TO SURVIVE: THE UNOFFICIAL COMPANION

Author Stuart Codling

Price £22

[quartoknows.com](https://www.quartoknows.com)



Love it or complain loudly about its occasionally brazen economy with the actualité, the Netflix series *Drive to Survive* has opened the eyes of a new audience to F1 – and enabled it to finally conquer America. This new book aims to offer both new and more time-served fans an expanded perspective on F1's past, present and future while digging deeper into some of the stories *Drive to Survive* presents in highly simplified form.

Written by the editor of this magazine, *Formula 1 Drive to Survive: The Unofficial Companion* includes chapters on F1 personnel past and present, a history of F1 in 20 cars, plus explainers on technology, politics, strategy and business in its 192 pages. It also reaches as far back as the first GP in 1906 – 12 laps of a 64.1-mile course...



WILLIAMS AND MANSELL: RED 5

Available on Sky Arts

Price from £9.99 per month (Now TV)

Formula 1 fans have been treated to a slew of excellent historic documentaries recently, including the award-winning *Villeneuve/Pironi*, and this new one from former *Top Gear* producer Jim Wiseman will delight British-based aficionados. Tackling the story of two British greats, *Williams and Mansell* tracks Mansell's rise from humble beginnings to world champion in parallel with the Williams team's similar trajectory from upstart to engineering powerhouse. Dismissed on account of his regional accent, unremarkable name and low-

profile CV, 'Our Nige' quickly won over the racing public after reaching F1 but it took him over a decade of graft to be in the right car at the right time.

It's a high-quality production, with some rarely seen archive footage and an array of star 'talking heads' including Jenson Button and Damon Hill. Ex-racer, Sky TV pundit and F1 superfan Karun Chandhok is excellent value, too, along with James Allen, *GP Racing* contributor (and former Williams team manager) Peter Windsor and long-time press officer Annie Bradshaw.



TYRRELL: THE STORY OF THE TYRRELL RACING ORGANISATION

Author Richard Jenkins

Price £90

evropublishing.com

Seasoned GP Racing readers will no doubt recall Maurice Hamilton's marvellous multi-part history of the Tyrrell marque. Now, with the 50th anniversary of Jackie Stewart's final world championship with Tyrrell on the horizon, Evro Publishing has released a book telling the story of the team. The format enables author Richard Jenkins – RAC Motoring Book of the Year award winner for his biography of Richie Ginther – to go into far more detail than any magazine feature.

The production values of this 464-page hardback are excellent and the author's scholarship is impeccable. Well-sourced archive material backs up the early years and, to flesh out the 1980s and beyond, Jenkins has spoken to many surviving team insiders including the likes of Martin Brundle, 019 aerodynamicist Jean-Claude Migeot and engineer Nigel Beresford. The tone never becomes maudlin, even when chronicling the team's glide path from greatness to cash-strapped backmarker status.



FINISHING STRAIGHT

THE FINAL LAP

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FLAT CHAT

FULL THROTTLE
MUSINGS WITH
MATT KEW

PICTURES



IS DOMINATION IN THIS NETFLIX ERA GOOD FOR THE SHOW?

Red Bull was punished for busting the cost cap in 2021 by having its aerodynamic testing allowance slashed. This could have stunted the team's in-season development. But it has started 2023 so strongly as to massively mitigate this kneecapping: the RB19 doesn't require aggressive upgrades to stay ahead. As a result, given its current potency and the plan to keep the regulations stable until 2026, a whitewash between now and then might well lie in store.

That potential hot streak would be far from unprecedented in Formula 1, which has bounced from one 'superteam' to the next. A second spell from Red Bull, to go along with its 2010-2013 clean sweep, would arrive hot on the heels of Mercedes snaring eight constructors' crowns on

Pérez to quash any internal rift. And, bar the first 11 rounds of last season, the opposition has hardly been breathing down Red Bull's neck. Since Ferrari is bleeding key staff to rivals and Mercedes continues to stumble in this ground-effects era, the team might not face an external threat either for some time.

That prospect poses a serious risk to F1's popularity. The lockdowns-inspired peak of *Drive To Survive* and one of the great grudge matches between Verstappen and Lewis Hamilton have been and gone. If the racing at the front remains predictable and unspectacular for the longer-term, TV audiences will drop. Should bums on sofas and grandstand seats dwindle, sponsors – who are currently queuing round the block – will disperse too.

As such, would Red Bull ever accept having its wings clipped for the greater good, rather than let F1 as a whole decline? When the (Puma) boot was on the other foot in 2015 team boss Christian Horner was lobbying for change, complaining Mercedes' dominance was hurting

the series: "Inevitably, with predictability, people get turned off and it needs a rejig to bring it closer together." Funnily enough, he's much less emphatic about the need to intervene now it's his squad that would be in the crosshairs. Horner tells *GP Racing*: "That's not my job [to decide]. My job is to win and the one thing that we know from this sport is that things will converge. You can already see it starting to happen and the most important thing to have convergence, is to have stability."

"Stability of regulations will bring all of the teams much closer together. You can see this is already starting to happen. It's not going to be another seven years of domination [like with Mercedes]."

If F1 really is living in a bubble economy and that bursts, the low ebb that was 2015 and 2016 – when people were questioning the health of the championship and several teams were on the brink of financial collapse – may seem mild in comparison. At that point, will the FIA and series bosses change their mind on what has been, publicly at least, a hands-off attitude to limiting the Red Bull advantage? F1 CEO Stefano Domenicali says: "It's not correct [to intervene] because we cannot be seen as part of manipulation."

Perhaps that admirably meritocratic stance would soften if commercial partners and broadcasters vote with their feet.



Horner says Red Bull is just focused on winning and thinks interference to curb that for the good of F1 is unnecessary

the trot. But would Red Bull doing similar until 2026 be a different kind of domination?

Mercedes had to navigate a bitter team-mate rivalry from 2014-16. The following two years asked Toto Wolff and company to see off a pronounced threat from Ferrari and Sebastian Vettel while taming a "diva" car. Then came a global pandemic before a toxic but blockbuster duel with Red Bull in 2021.

Now, though, Max Verstappen clearly has the performance and psychological measure of Sergio

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